THE WILSON BULLETIN

A QUARTERLY MAGAZINE OF ORNITHOLOGY
Published by the Wilson Ornithological Club

Vol. XLI DECEMBER, 1929 No. 4

Vol. XXXVI (New Series) Whole Number 149

IN SEARCH OF THE LOON *(GAVIA IMMER)* WITH MOVIE CAMERA

BY OWEN J. GROMME*

Illustrated with Photographs by the Author and Frontispiece by Dr. Frank N. Wilson.

In Northern Wisconsin the large area known as the Land O'Lakes furnishes almost unparalleled opportunities for the naturalist and wild life photographer. Many years ago the waters of the hundreds of natural lakes were raised to facilitate logging operations; and the resulting deep thoroughfares make it possible to travel for many miles by canoe with few land portages.

In the spring of 1925, during the month of June, the Milwaukee Public Museum party, while engaged in general field and movie work, located the nest of a Loon in Bass Lake, Michigan, just across the Wisconsin line. The nest was merely a heap of vegetation and contained the usual two eggs. It was situated on the only cattail islet in the lake, and a nearby clump of willows suggested itself as a possible means of concealment from which a photographer could work.

Having had no previous experience with the Loon, a general discussion ensued as to just how to go about getting the movie camera close enough without disturbing the subjects. An old unused scow looked likely enough, so with the aid of hammer and nails and a few boards it was made temporarily seaworthy. A rude, spacious canvas blind was constructed over a light framework in the bow and built to accommodate the cameras and operator.

Next morning the party started out with the clumsy barge in tow of a canoe, propelled by a small outboard motor. A heavy head wind brought progress to a snail's pace, as the blind acted as an impediment which put us more or less at the mercy of the wind. Consequently, our "rudder end" was continually pulled out of a straight course. When out in the middle of Mamie Lake the barge began to sink, so a member of the party was assigned to a one-man bucket brigade. After an hour of hard work, the "Loon Island" was reached.

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The two Loons were observed out on the lake several hundred yards from the nest, and seemed to manifest no apparent interest in our activities.

As the nest island was nothing more than a floating bog, the scow was easily towed up behind the willow bush and brought to a position from which the front of the blind was but seven feet from the nest. By filling the scow with water it was sunk to firm bottom, thus assuring a rock steady footing for the camera tripods. A rude seat was constructed for the operator and holes cut in the canvas through

FIG. 1. Blind from which Loons were photographed.

which the camera lens was to project. Everything was made in readiness so that the camera outfit could move in without in any way disturbing the surroundings. It was decided to give the birds several days to acquaint themselves with the new surroundings before attempting any photographic work.

While maneuvering the blind into position, a faint peeping was heard in the direction of the nest. Investigation proved the interior of the eggs as the source of the sound, so we decided that the hatching was soon to take place.

On the morning of the second day, three of us in a canoe quietly paddled out to the "set up" and were encouraged by the sight of one

of the old birds as she left the island. She had at least accepted our blind as part of the general order of things. The writer and camera were quickly placed within the blind, and the two remaining men paddled away. Immediately the cameras were focused and convenient peep-holes cut in the canvas for observation. As is the general rule, the writer prepared himself for the usual long vigil. Imagine his surprise when upon trying out one of the peep-holes he beheld Mrs. Loon there at the edge of the nest and almost within arm's reach. She had appeared as if by magic, but later observations proved that

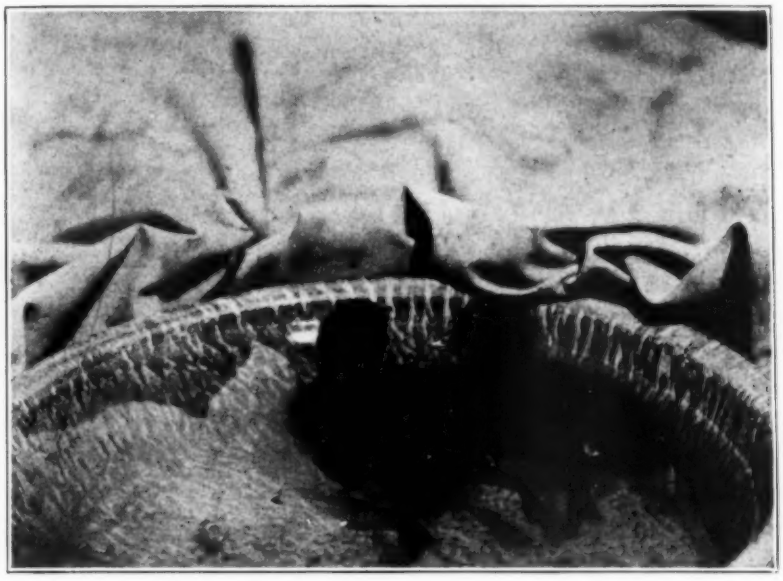

FIG. 2. Young Loons.

this was the "submarine route" up a tiny waterway that led from the open lake to the nest.

Perhaps from the Loon's point of view, the departure of the men in the boat removed the human element and totally unsuspicious she came straight to the nest before the departing boat was two hundred yards away. Needless to say, this moment was for the movie operator, an exciting one. So absorbed was he in admiration of the graceful wild thing, that he almost forgot about the camera. Lest the Loon frantically depart at the first click of the shutter, the "Akeley" was very slowly brought into motion, and soon the normal speed of sixteen pictures per second was attained. Ten—twenty—fifty feet of film, and the bird remained motionless. Perhaps she associated the

low buzz of the shutter with the continual hum of boat motors going up and down the lakes—at any rate she held her ground. In my excitement, a board was accidentally rattled and the Loon disappeared like a flash. In less than five minutes she was back again. Clumsily she climbed aboard the nest, and while resting on her entire tarsus and feet, she slowly turned over the eggs. This she did with the body quite erect and with the shoulders of the wings slightly away from her sides. The neck was bent downward at an angle of about forty-five degrees, and the bill when brought in contact with the egg, was slightly opened like a shears and the sides used to maneuver the eggs into position. This gave the bill two points of contact, thus enabling the egg to be moved in any desired position. Accompanying photographs show this action quite clearly.

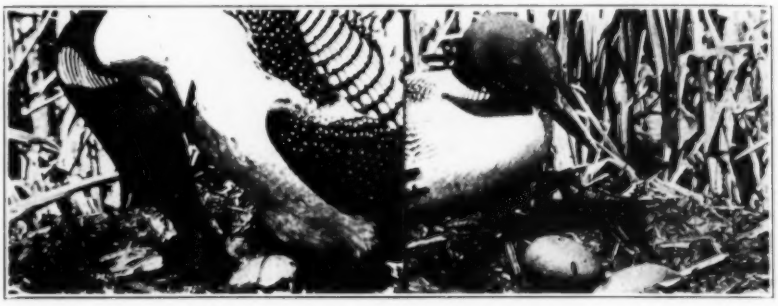

FIG. 3. Loon approaching nest. Shifting egg with partly opened mandibles.

After a brief inspection, she pushed herself forward a few inches, and very heavily flopped down. It seemed as if the eggs would be broken, but the forward part of the breast only received the force of the impact, and she carefully backed over the eggs nestling them under the breast well to the rear of the body. As she covered the eggs completely, their exact position could not be observed from the operator's limited point of vantage. She quietly settled to her brooding, but kept an unfaltering gaze of her red eye on the source of the sound in the blind, for every movement was being recorded on the ribbon of film.

She remained on the nest for half an hour—left for five minutes, and returned repeating the same performance described above. The operator stayed in the blind for the remainder of the hours of light, and the bird's several departures and returns were repetitions of already recorded performances. She always turned the eggs upon her

return. During the operator's time in the blind, the other bird was nowhere in evidence.

It was hoped that the following day would find us "sitting in" on the hatching, but a driving cold rain discouraged any work from the blind. As we had expected, upon our return the next bright day, we found only an empty nest with the flattened fragments of eggshells. Our time was limited and it was impossible to await hatching from other nests, so our "much movied" Loon family was soon located in the shelter of a quiet cove on the opposite side of the lake. From the bow of a canoe, both young were photographed as well as the frantic maneuvers of the adults in their vain attempt to distract our attention from their helpless offspring.

Considering our efforts well repaid, we postponed further work with the Loons for a later date, and returned to Milwaukee.

MILWAUKEE PUBLIC MUSEUM,
MILWAUKEE, WISCONSIN.

ON A COLLECTION OF GYRFALCONS FROM GREENLAND

BY WALTER KOELZ

The bird collection of the University of Michigan contains eighty-one Greenland gyrfalcons. All but nine are in juvenile plumage; four are full fledged nestlings. Except for three specimens (two nestlings and one adult) taken by me along Smith Sound north of Cape York (about lat. 78° N.) and five from the Lehn-Schioler collection, Copenhagen, taken on the east coast at Carlshavn (lat. 72° N.) and Shannon Island (lat. 75° N.) all the rest are from the west coast from Upernivik (about 73° N.) to Frederikshaab (about 62° N.).

The three Smith Sound birds were taken as follows: two nestlings (male, female), Etah, August 13, 1925; adult male, Igloodahauny, August 20, 1925. The five east Greenland birds have the following data: Carlshavn, adult female, September 25, 1923; juvenile female, September 2, 1921; juvenile male, September 28, 1923; juvenile female, September 19, 1921; Shannon Island, juvenile male, September 9, 1920. Of the other birds, listing the localities from north to south, juveniles are present as follows: two from Upernivik, "summer" and December 21, 1925; two from Godhavn, September, 1923; fifteen from Christianshaab District, September 12 to November 5, 1925, and one February 25, 1926; fourteen from Egedesminde District, August 23 to November 4, 1925, and 1926, and two nestlings July 15, 1926; one from Holstenborg, fall, 1928; one from Kanga-

miut, March 12, 1918; four from Sukkertoppen, August 27 to September 27, 1923, and 1924; nineteen from Godthaab, August 15 to May 2 over several years; seven from Frederikshaab, October 30, 1921 to January 26, 1922. The eight adults from the west coast were taken as follows: Christianshaab District, male, September 30, 1925; Egedesminde District, female, January 20, 1926; Sukkertoppen, female, February 28, 1926; Godthaab, female, December 7, 1896, male, March 27, 1897, female, March 12, 1905, male, January 8, 1913; Fiskenaesset, male, February 10, 1913.

It is now generally believed that there is but one species of Arctic falcon, typically *Falco rusticolus* Linnaeus from Sweden. The range of *rusticolus* is given as Scandinavia to N. Russia. The number of forms accepted in this species group is variable, but no one would probably find it necessary to recognize more than five variants. Subspecies *candicans* Gmel. is found in north Greenland and Arctic America; *islandus* Brunn is variously attributed to South Greenland, Iceland, and Arctic America; *obsoletus* Gmel., Labrador; *alascanus* Swann, Alaska; and *uralensis* Sew. and Menzb., Siberia.

Hartert in "Die Vogel der palaarktischen Fauna" recognizes the existence of several forms in Greenland but designates them all as *candicans*, probably because he believes that they all breed together. He says (p. 1066) that certain Greenland birds cannot be distinguished from Iceland birds and on page 1068 that some Greenland and Iceland birds cannot be separated by their plumage from Scandinavian birds. The differences in measurements between any of the forms are slight.

Even if it should be found to be true that these morphological forms are not segregated in breeding, it seems unfortunate that a subspecific name should be based rather on the population of a geographic unit than on a morphological form. Under such a system three birds of identical size and plumage have different names depending on whether they originate in Scandinavia, in Greenland, or in Iceland! Ornithologists in general are loathe to give up the geographical connotation of the subspecies concept, though botanists and some other zoologists have come to realize its inadequacy. Circumstances that contribute to retain it are connected with the ability of birds to move over vast areas, but it will certainly be found when variation in birds is intensively studied that geographical units have not so homogenous a population as has been supposed.

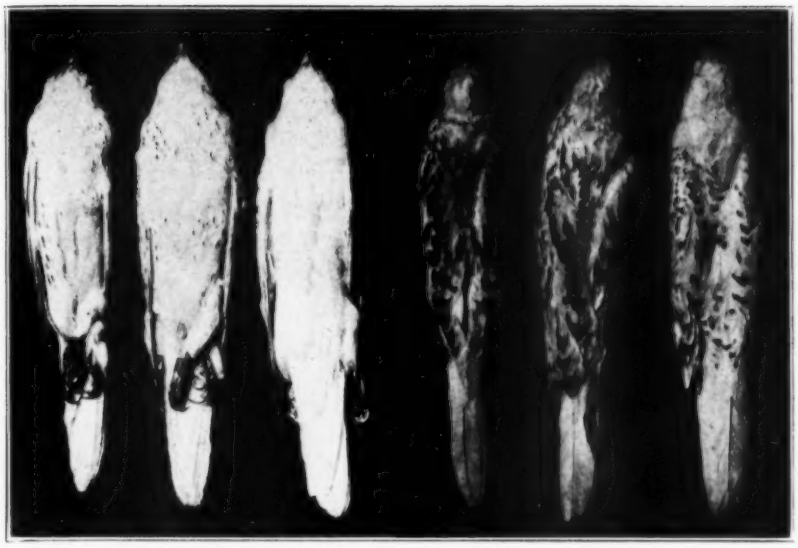

FIG. 4. Falco rusticolus candicans Gm. Left to right, juvenile male and juvenile female, taken from a nest at Etah, North Greenland, on August 13, 1925; adult male Igloodahouny, North Greenland, August 20, 1925.

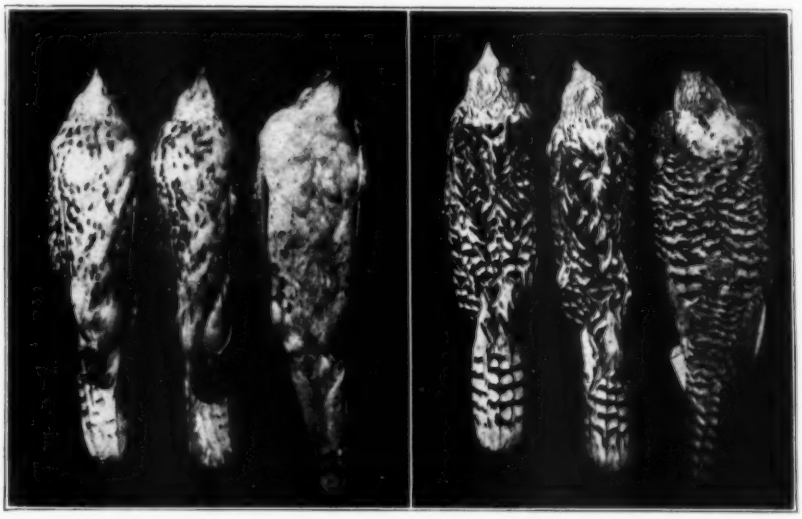

FIG. 5. Falco rusticolus islandus Brunn. Left to right, juvenile male and juvenile female, taken from a nest at Nivak, Egedesminde District, Greenland, on July 15, 1926; adult male Godthaab, Greenland, March 27, 1897.

My collection shows the three forms of gyrfalcon that Hartert assigns to Greenland. The two juveniles from Etah, North Greenland, and the August adult from Igloodahouny, North Greenland, would certainly be considered good examples of *candicans*, coming as they do from the northern limits of the species range. The juveniles are male and female, wings 330 mm. and 363 mm., respectively. (These values are low and it is likely that the quills are not full grown. The birds were still in the nest). A third was reared in the nest but fell off the cliff earlier in the season, according to Nukapingwa, who located the aerie.

The two birds are almost alike in color, (Fig. 4).* The under parts are entirely white with a creamy cast, except for a band of narrow streaking of brown on the feathers of the breast (the male specimen has only the sides of the breast streaked), and broader streaks of the same color on the feathers of the sides. The under tail coverts and the tarsals are immaculate. The general tone is white above. The top and the sides of the head are faintly lined along the feather shafts with dark brown. The feathers of the back have a streak of brown along the shaft of the feathers, which broadens as it nears the tip to become rather pendant-shaped. On the shortest scapulars the drop becomes broader so that the feathers here may be described as brown with a broad border of white. The upper tail coverts are streaked like the breast. The tail feathers are pure white. The wing coverts are marked about like the scapulars; the short ones with a central field of brown and the longest ones with broken v-shaped crossbars. The wing feathers are white with dark shafts and a few broken bands of dark brown, chiefly near the tips. The adult has the entire under parts immaculate (Fig. 4). The back is chiefly white. The crown, sides of head, and fore part of the back are unspotted except for a few lines of black brown on the ear coverts and on a few feathers of the occiput. The upper tail coverts, the rest of the back, and the wing coverts are barred with arrow-shaped blotches of black brown. The tail is virtually pure white.

The plumages of adult and juvenile are thus different. Young birds have the markings paler, probably more numerous, and they tend to run lengthwise of the feather, especially on the short feathers.

The two nestlings from Nivak, Egedesminde District, collected on July 15, 1926, are also much alike (Fig. 5). They are marked male

*Two young birds which were given to the Boston Society of Natural History by Capt. Donald MacMillan in 1924, were virtually like these. They also were reared at Etah, possibly by the same parents.

and female, wing 317 mm. and 315 mm., respectively, indicating that the feathers are not yet full grown. These birds are much darker than the young *candicans* described above and would be considered representatives of subspecies *islandus*.

The general tone of the under parts is buffy white. (The buff apparently fades out with age, though old specimens that have been blood-stained show local areas of such tone). All the feathers, including the undertail coverts and tarsals, have heavy pendants of dark brown at their tips, except the throat which is rather faintly streaked. The back is dark. The top of the head is heavily streaked with dark brown but the tone is decidedly lighter than that of the back. The short feathers of the back are brown with a narrow border of buffy white. An irregular V of whitish is cut out toward the free end, though often only one branch of the V is present. The longer feathers may have two or three such V's while the longest of the scapulars and tertials may be described as dark brown with notches of white about 1 cm. wide extending from opposite sides of the feather almost to the shaft, with intervening spaces of brown of about the same width. The outer web of the primaries and secondaries is dark brown with small islands of cloudy buff. The inner web is whitish with saw teeth of brown extending into it from the shaft, with the free border lined irregularly with pale brown. These saw teeth are shortest on the first primary. On the secondaries they usually extend to the margin of the web.

The two central rectrices of the tail are crossbarred with dark brown. The dark bands are about 8 mm. wide, the light ones slightly wider. The final band tends to be elongate. The outermost rectrices are barred only on the outer web. The bars of the inner web are broken into mottling which, however, still shows the position of the bars. The intervening feathers are longitudinally striped and mottled on the outer web with an occasional blotch or bar near the free border of the inner web.

Fortunately, I have a young bird taken at Frederikshaab on January 26, 1922, very similar in color to these two birds, which is molting to adult plumage. Comparing the new feathers with those of my fully adult specimens I find two birds which it would probably closely resemble. Both were collected at Godthaab, one female on March 12, 1905, and one male March 27, 1897. These two birds are almost identical in plumage. I shall describe the latter. (Fig. 5).

The under parts are white. The throat and breast are immaculate except for a black shaft line on an occasional feather of the side of the breast. The feathers of the belly and sides and the tarsals and the shorter undertail coverts have irregular arrow-shaped blotches near the tip; the longest feathers have one or more other blotches, chiefly on the outer web, along the shaft. The color of the blotches is black brown except on the long tarsals and on the under tail coverts where they are greyish brown. The longest undertail coverts have usually only a faint line of brown black along the shaft near its tip.

The general tone above is slaty. The top of the head is creamy, broadly streaked with black brown, its tone distinctly lighter than that of the back. The two spots of the hind neck are whitish with faint streaks. The feathers of the lower back, rump and upper tail coverts are slaty blue with darker transverse bands, the bands of light and dark about equal in width. The rest of the back feathers and those of the wings, exclusive of the primaries and secondaries are grayish white with transverse bands of gray grown, darker than those of the lower back.

The longest primaries are white on the inner web with saw teeth in brown extending to or nearly to the web margin. The outer web is brown with whitish notches along the free margin. The feathers become darker as they decrease in length, the areas of brown becoming greater and the white becoming mottled grey-brown.

The tail is whitish with narrow (5 mm.) gray brown crossbars, the crossbars fading to a slaty blue. The dark areas are about half the width of the light areas.

The collection contains specimens of every intermediate stage between the two types described and it also contains many examples that are much darker. In Fig. 8 are shown three birds, an adult (right) and two juveniles from East Greenland, all examples of *candicans*. The bird to the left is as light as the Etah juveniles. The central bird is about as dark as the form becomes. Darker birds show spotting on the undertail coverts, which has been considered the characteristic that separates *islandus* from *candicans*. The adult is comparable in plumage with this dark juvenile. In Fig. 6 (left) is shown another such dark *candicans* in juvenile plumage, along with a juvenile *islandus* and a light *rusticolus*.

The darkest of these Greenland birds (in juvenile plumage) may be predominantly dark in tone on all surfaces. The throat in such specimens is palest, being whitish, more or less heavily streaked with

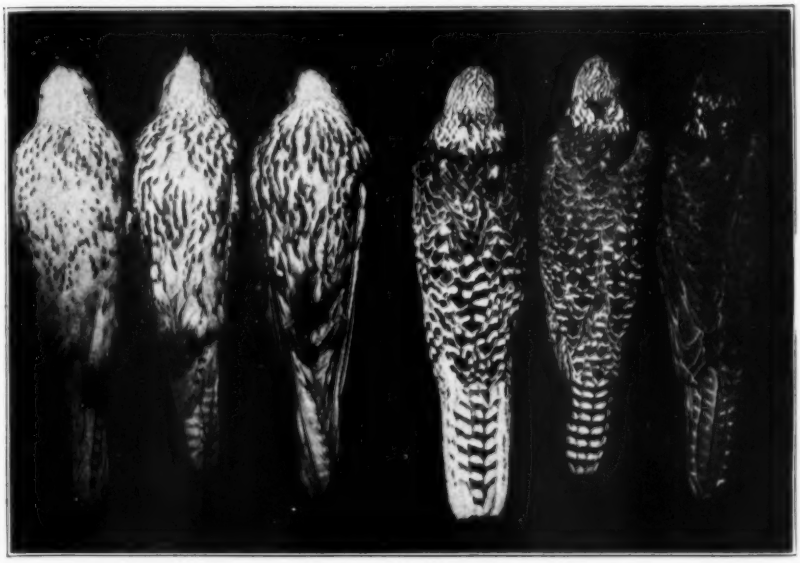

FIG. 6. Left to right, juvenile specimens taken at Godthaab: Falco rusticolus candicans Gm. (dark phase), female, April 2, 1926; Falco rusticolus islandus Brunn, male, October 10, 1925; Falco rusticolus rusticolus, female, February 5, 1926.

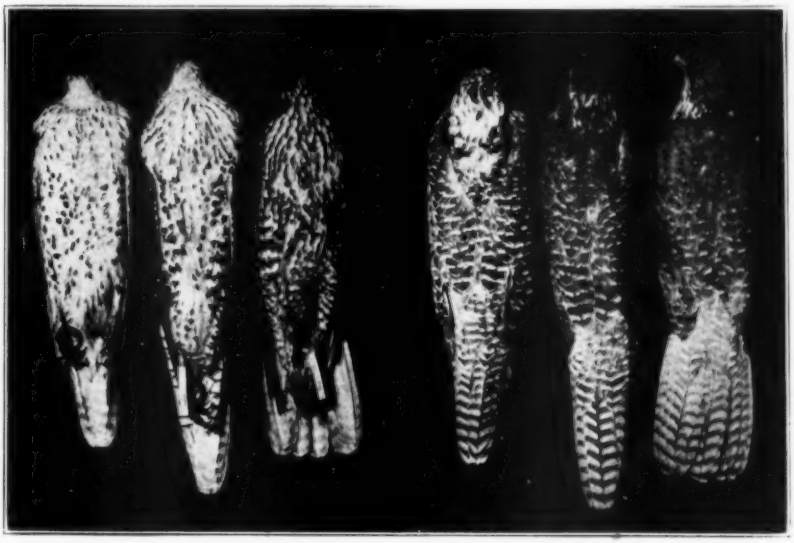

FIG. 7. Falco rusticolus adults, left to right, islandus, male, Godthaab, Greenland, January 8, 1913; rusticolus female, Karasanda, Lapland, April 14, 1896 (M. C. Z. No. 47845); obsoletus male, Stowe, Mass., 1881 (M. C. Z. No. 13560).

dark brown. There are distinct moustache patches, i. e., the side of the head from the crown to the throat is uniformly dark. The feathers of the under parts are dark brown with streaks or longitudinal spots of whitish, except those of the belly which are all brown with narrow rims of paler. The upper surface is almost uniformly dark. The feathers of the back are dark brown with narrow borders of lighter. The crown is as dark as the back, the only light tones being in the two nuchal "spots," where the feathers are broadly edged on the sides with whitish, and on the longest upper tail coverts where small scallops of whitish to brownish white are cut out of the borders of the feathers. All the tail feathers are broadly tipped with whitish. The two innermost rectrices may be completely dark, but there are always about twelve irregular lighter crossbars, 10x5 mm., usually indicated only as slightly paler areas. The outermost rectrices are predominantly dark. The outer web is bordered with a very narrow band of light brownish mottling, broadest as the base is approached. The inner web has twelve or more narrow bands of mottled buff to light brownish white invading the field from the border, not extending to the shaft. These bands are narrower than the dark areas that they separate. The intervening rectrices tend to have spots on the outer web and the barring of the inner web becomes less mottled as the central rectrices are approached. Fig. 9 shows the darkest bird of the collection, a juvenile female, taken by me at Godthaab on September 15, 1925. Fig. 6 (right) shows a bird paler, especially below, than the one described here. The other *rusticolus*[1], from Sukkertoppen, is a little paler below than Fig. 9.

Two of these dark juveniles, a male taken March 5, 1926, and a female November 11, 1923, at Godthaab, are molting. The adult feathers are darker than those of my darkest adult, a male taken on January 8, 1913, at Godthaab (Fig. 7 left). This bird is in general like the adult *islandus* previously described but the breast is heavily streaked, the throat alone being immaculate. The entire upper surface is darker, the light areas being reduced in intensity and area and the dark areas being much darker, with no slaty blue except on the upper tail coverts.

The darkest adult is in color much like a specimen from Lapland, typical *rusticolus* (Fig. 7 center), except that the light color of the feathers of the nuchal patches is more brownish than in the bird from

[1]This is one of Lehn-Schioler's birds and was identified by him as *F. rusticolus rusticolus*.

Greenland and there is more white throughout. There is, however, a molting young bird which shows the same brownish tone in the nuchal feathers, so this may be no constant character. The darkest of the juveniles from Greenland would undoubtedly assume an adult plumage indistinguishable from *rusticolus* or even *obsoletus* (Fig. 7 right), as Hartert says.

Distribution

The specimens of the collection may be grouped according to locality, beginning north, as follows:

Locality	*No. specimens*	*Date*	*Subspecies*
East Greenland	5	September	candicans
West Greenland			
Etah	3	August	candicans
Upernivik	2	Summer Dec. 21	islandus, rather dark
Godhavn	2	September	one candicans, one rather dark islandus
Christianshaab Dt.	16	Sept. 21-Nov. 5 Sept. 12-Feb. 25	9 candicans, 5 rather dark 7 islandus, 1 very dark
Egedesminde	15	Sept. 26-Jan. 20 July 15-Nov. 1	8 candicans, 2 dark 7 islandus, 3 dark
Holstenborg	1	Fall 1928	islandus
Kangamiut	1	March 12	islandus
Sukkertoppen	5	Sept. 7, Feb. 28 Sept. 26, 27 Aug. 27	2 candicans 2 islandus, 1 dark 1 rusticolus
Godthaab	23	Aug. 15-April 5 Sept. 16-Mar. 27 Aug. 20, Mar. 5	10 candicans, all but 2 dark 11 islandus, 6 dark 2 rusticolus
Fiskenaesset	1	Feb. 10	islandus
Frederikshaab	7	Oct. 30-Dec. 20 Dec. 2-Jan. 26	4 candicans, 1 dark 3 islandus, 1 dark

To these data may be added sight records made by me in August, 1925, while with the MacMillan Arctic Expedition of 1925. On the 14th at Nawyardi, some five miles north of Etah, a gyrfalcon was observed at close range. The Eskimos later pointed out the aerie on a cliff about twenty feet high and said the young birds had just left the nest a few days before. On the 20th a flock of four birds was seen flying at Etah. Two juvenile birds were seen on the 25th on Bell Rock (about lat. 77° N.) where Captain MacMillan said they always nested. All these birds were very white and were certainly referable to the form *candicans*.

Mr. C. O. Erlanson, of the University of Michigan, informs me that he found a nest of gyrfalcons, located about 100 feet high on a cliff on the Nakajanga Peninsula (West Coast), lat. 66° 50′, in the summer of 1927. Both adults came very close to the observer. Mr.

Erlanson says these birds were certainly not white, but rather of a grayish cast beneath with wings barred with dark and light. They were undoubtedly *islandus*, the form I should expect to find in this area.

It thus appears from these data that the breeding birds of the west coast of Greenland as far south as lat. 76° N. and probably from the east coast as far south or farther (the east coast is much colder) are *candicans*. From this point southward birds of all three types are known. Except for the two nestlings (*islandus*) from the Egedesminde District and Mr. Erlanson's two adults from Nakajanga none of the rest of the specimens collected in this area were certainly native to the areas in which they were taken. The adult male taken at Godthaab on March 27, 1897, (*islandus*) and the two juvenile females taken on April 2, 1926, and April 5, 1924, (dark *candicans*) may or may not have been breeding. (The young birds were just beginning to molt to adult plumage).

The *candicans* type is represented from every locality from which more than two specimens were taken. Beginning with Upernivik about lat. 73° N. *islandus* specimens are represented from every locality. One out of five birds from Sukkertoppen and two out of twenty-three from Godthaab (about lat. 66° to 64° N.) are very dark birds probably referable to *rusticolus* or *obsoletus*.

That the falcons may migrate extensively is true beyond doubt. This migration, furthermore, probably may be either northward or southward, so that birds bred in the south may be found far north of their breeding range. This is certainly true of other hawks. The *candicans* taken below lat. 76° N. all then are probably migrants. All had abundant time to get so far away from the supposed breeding range of the form except one young bird taken at Godthaab, August 15, 1926. If this bird is a bird of the year and was bred north of 76°, it traversed some 700 miles from the time it left the nest. This seems improbable inasmuch as the Etah birds were still in the nest on August 13; the Nawyardi birds had flown about that time; the Bell Rock birds still lingered at the site. Of course, the breeding range of *candicans* may extend several hundred miles to the south, in which case it would be more tenable to assume that this bird was a migrant. It is also possible that the date of capture is incorrect or that the bird is not of the year and not a breeder. It has further been suggested that non-breeding gyrfalcons may linger during the year in their winter quarters. We know this to be true in some birds.

Islandus is probably the breeding bird south of the range of *candicans*. The nestlings from Egedesminde are rather light examples. Their parents are said to have been light birds also, though how light is not known. Mr. Erlanson's birds seem to have been typical birds of the form. From this point southward I assume that the birds grow darker, so that around Sukkertoppen and Godthaab the darkest ex-

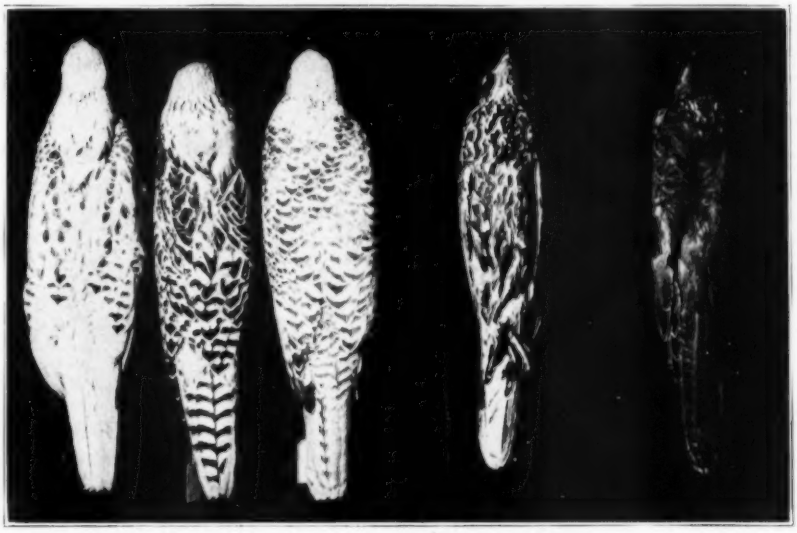

Fig. 8. Falco rusticolus candicans Gm. from East Greenland. Left to right, juvenile male, Shannon Island, September 9, 1920; juvenile female, Carlshavn, September 19, 1921; adult female, Carlshavn, September 25, 1923.

Fig. 9. Falco rusticolus rusticolus L. juvenile female from Godthaab, Greenland, September 15, 1925. This is the darkest bird in the entire collection, but unfortunately the high lights make the bird appear lighter than it is. (Compare with Fig. 6, right).

amples occur, whether regularly or only sporadically. These are the birds which seem close to the darkest forms known in the species group. (The effect of the Gulf Stream is strongest in this area. It is still felt somewhat north of Egedesminde, so that the southern flora is found on parts of Disco Island).

The distribution of the gyrfalcon forms in Greenland is in general like that of the redpolls. North of 76° (the range may be lower) is the palest form, *Acanthis hornemanni* of American ornithologists. Southward the birds grow darker until around Disco Island the dark bird, *Acanthis linaria rostrata* is found. It ranges south all along

the west shore. I found it very abundant at Godthaab, even far into the fiord. Two females in worn plumage taken by me at Etah in August are practically indistinguishable from southern birds, due to the abrasion of the lighter parts of the feathers. Some twenty-five examples in fresh fall plumage were also taken and these are of course much paler than the birds of the south. I have no doubt (there being no other differences in the two groups of specimens except that the northern birds have a somewhat longer wing and tail) that the two forms intergrade and I consider them both races of *Acanthis linaria*. The ptarmigan (*Lagopus rupestris*) in Greenland appears to vary in the same way, as Lehn-Schioler has shown.

Size. The various forms appear to be of the same size. Arranged according to sex as indicated on the label, the wing length in centimeters is given below for the individuals of the collection not including the four nestlings:

Sex	34	35	36	37	38	39	40	41	42	43
Male	1	1	9	8	2	2	5	8	2	
Female	1	0	3	3	2	3	9	13	3	1

Very probably the larger "males" and the smaller "females" are improperly sexed.

Molt. It has been stated often that the falcons did not molt to adult plumage until several years old. These observations have been based mostly on captive birds. In the following table are given observations on plumage condition of birds taken after January first:

Place	*Date*	*Sex*	*Plumage condition*
Godthaab	Jan. 5, 1926	male	no molt
Godthaab	Jan. 8, 1913	male	adult
Egedesminde	Jan. 20, 1926	female	adult
Godthaab	Jan. 18, 1926	male	no molt
Frederikshaab	Jan. 26, 1922	?	molting upper tail coverts
Godthaab	Feb. 5, 1926	female	no molt
Ikamiut	Feb. 25, 1926	male	no molt
Sukkertoppen	Feb. 28, 1926	female	adult
Godthaab	Mar. 5, 1926	male	molting upper tail coverts on back and hind neck
Godthaab	Mar. 12, 1905	female	adult
Kangamiut	Mar. 12, 1905	female	no molt
Godthaab	Mar. 27, 1897	male	adult
Godthaab	Apr. 2, 1926	female	molting on the back
Godthaab	Apr. 5, 1924	female	molting upper tail coverts
Godthaab	May 2, 1910	female	no molt

In addition to these a female taken at Godthaab on November 23, 1923, had begun molting her upper tail coverts.

Of the fifteen birds collected after the first of the year five were fully adult. Of the remaining ten, six showed no signs of molting. It is possible then that the Greenland gyrfalcons retain juvenile plum-

age for at least a year. The upper tail coverts, and the feathers of the back and hind neck seem to be changed first.

Museum of Zoology, University of Michigan,
Ann Arbor, Michigan.

DR. ELLIOTT COUES—A SKETCH

BY MRS. H. J. TAYLOR

Elliott Coues was born in Portsmouth, New Hampshire, September 9, 1842. He died in Baltimore, Maryland, December 25, 1899, aged 57 years. He is buried in the National Cemetery at Arlington. When he was 11 years old the family moved to Washington, D .C. Aside from being stationed at various posts during his seventeen years of Army service, Washington was home throughout his life. Here he was graduated from Columbian University with the degree of A. B., in 1861. Two years later he received the degree of M. D. from the same university. Some years later this institution conferred on him the honorary degree of Ph.D.

While studying medicine Coues was a cadet in the United States Army. On receiving his degree in 1863, he was appointed Assistant Surgeon and ordered to duty in Arizona which had, in February, 1863, been made a territory. The population was 581, exclu ive of Indians and Mexicans. Arizona ranks fifth in size among the states, having an area of 113,040 square miles; this gave about one white person for every 200 square miles. No wonder the detachment took with them eighty wagons laden with subsistence, twelve luggage wagons, a herd of 300 beef cattle and 800 head of sheep, 560 mules to draw the wagons, and 163 horses for cavalry and officers![1]

Men sent to such a new country needed a good physician and they had one in Dr. Coues. But a man with his energy, zeal and brain could not express his life through a single channel and that one limited. His interest in birds began early; he was fortunate to have been under the tutelage of Professor Baird with whom he was connected in the Smithsonian Institution before he graduated from college. With his friend, D. W. Prentis, he published a list of birds of the District of Columbia, in 1861, and it was re-published in 1883.

Arizona with its wonderful rivers and incomparable canyons, its mountains, plains, and mesas, lay before this eager student as a rich and interesting field. ". . . Dr. Coues entered Arizona in 1864, and spent nearly two years studying the natural history of the Territory."[2]

[1]Curtis, Capt. C. A. *Bird-Lore*, IV, 1902, page 6.

While at Fort Randall in Dakota, in 1873, he was appointed surgeon and naturalist of the Northern Boundary Commission, which surveyed the line along the 49th parallel from Lake Of The Woods westward. "In 1876 his services were secured as secretary and naturalist of the United States Geological and Geographical survey of the territories under Dr. F. V. Hayden."[3] This furnished a wide field and a rare opportunity for further study of birds. Dr. Hayden, referring to "Birds of Colorado Valley," says: "Results of Dr. Coues's continued studies of North American ornithology, in connection with the Survey under my charge, are herewith presented as one of the series of *Miscellaneous Publications* (No. 11)."[4]

The main text in "Birds of Colorado Valley" is "life histories" and it was the aim of Dr. Coues ". . . that this portion of the subject should be so far divested of technicality as to meet the tastes and wants of the public rather than the scientific requirements of the schoolmen in ornithology."[5] Dr. Coues edited all the publications of the Survey from 1876 to 1880, besides contributing several volumes from his own pen during this time. Among these were "Furbearing Animals" and "Monographs of the Rodentia," both published in 1877. "Birds of the Colorado Valley" was published in 1878. It extends over territory not covered in his "Birds of the Northwest," which was published in 1874. He also published several installments of "Bibliography of Ornithology." This attracted attention in Europe and placed him in the front rank as a bibliographer. "Dr. Coues was signally complimented by an invitation, signed by Huxley, Darwin, Flower, Newton, Sclater, and about forty other leading British scientists, to take up his residence in London and identify himself with the British Museum."[6] His "Bibliography of Ornithology" is an immense work. Several installments were published in 1878-1880, ". . . the greater portion still remaining in manuscript."[7]

The highest honor an American scientist can receive was bestowed on Elliott Coues in 1877 when he was elected a member of the National Academy of Science which had been incorporated by the 37th Congress in 1863. In 1878-1880, he became a member of nearly all the scientific societies in America and of several in Europe.

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[2]F. V. Hayden *in* Prefatory Note, "Birds of the Colorado Valley," 1878, page x.

[3]National Cyclopedia of American Biography, page 240.

[4]F. V. Hayden, *op. cit.*, page v.

[5]F. V. Hayden, *op. cit.*, page vi.

[6]National Cyclopedia of American Biography, page 240.

[7]Elliot,, D. G. *Auk*, XVIII, 1901, page 4.

The practice of medicine seems never to have been an absorbing interest with him, yet he was intensely interested in the subject of anatomy, and after resigning from the army in 1881 he lectured for ten years on this subject in the medical school from which he had been graduated. The world knows him, not as a physician, but as a naturalist, ornithologist, and historian. His ever widening horizon and increasing interest, his knowledge, his accuracy, his energy, led him into the field of Natural History till it became all absorbing, when suddenly he was ordered to duty on the frontier. "He obeyed the order and proceeded to Arizona."[8] Here he faced a situation that called for decision. The Missouri River basin and the whole Northwest had been opened to him as a rich field of study. He realized that he had outgrown routine medical duty. It was wearing on him and distasteful to him. He returned to Washington November 17, 1881, resigned from the army to which he had given seventeen years of service, and was free to follow the deep interests of his life. A man with such varied interests, with strength and zeal to pursue them, with rare ability to express them, could not and should not have his tasks laid out for him. He returned to his desk in the Smithsonian Institution. "New England Bird Life" came from his pen in 1881. This was followed by "Dictionary and Check-list of North American Birds" in 1882, also a new edition of "Key to North American Birds," of which Dr. Chapman says: "It is, beyond comparison, the best book on general and systematic ornithology ever published, and has contributed more to the advance of American ornithology than any other work since the time of Audubon."[9] In 1895, Coues began to prepare the fifth edition of the "Key to North American Birds." This was fortunately ready for publication several weeks before his death.

Of "The Key," Dr. D. G. Elliot, one of the leading biographers of Coues, says: "The work by which he (Coues) will probably be best known and remembered, and which has had above all others the most influence on ornithology in our own land, is his 'Key to North American Birds,' a work that in its conception and the masterly manner in which it is carried out in all its details stands as one of the best if not *the* best bird book ever written."[10] His "Key" is the work of a rare student whose unbounded energy, undaunted perseverance, unlimited ability and literary gift, bequeathed to ornithology a priceless volume.

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[8]National Cyclopedia of American Biography, page 240.
[9]Chapman, F. M. *Bird-Lore*, II, 1900, page 4.
[10]Elliot, D. G. *Auk*, XVIII, 1901, page 4.

In 1880 Coues became interested in the doctrines of theosophy, and held important offices in the American branch of the Society. He was eventually expelled from this organization.

Coues was a prolific writer. He had a marvelous command of language, a style clear and concise. Time and labor mattered not to him when investigating a subject. His ability and his vast store of knowledge had no market value for him. He loved scientific work and to it he gave all his talents. His papers, reviews, and criticisms on scientific subjects numbered about one thousand. He was the author or joint author of thirty-seven volumes—all in fifty-seven short years. He edited the departments of Zoology, Biology, and Comparative Anatomy for the Century Dictionary. To this he devoted seven years of work and contributed some 40,000 entries.

As editor of the *Osprey* from the middle of 1898 till shortly before his death in 1899, we have a different and very interesting view of this many-sided man. When he made a copy his statements were unquestioned; his mechanical structure was correct; his style unparalleled. Now he is on the other side of the desk. He is a marvelous critic, gives favorable comment where it is deserved, and when not deserved he sends shafts direct and piercing as an arrow, all clothed in delightful humor.

A few examples of his editorial style may be appreciated more now than at the time.

First we may take the following quotations from his review of D. G. Elliot's "The Wild Fowl of the United States and British Possessions." He says: ". . . Mr. Elliot shows that he has opinions of his own and is not afraid to express them; that is to say, he follows the A. O. U. Code and Check-list when he thinks proper, and differs from it when he thinks he can improve upon it. . . . Mr. Elliot differs from the Check-list in perhaps twenty cases . . . and we trust that the committee which holds all this matter in the hollow of its collective hand will reckon with Mr. Elliot, most of whose departures from the Union's nomenclature seem to us distinct improvements upon it. We also note to our joy the outward signs of that inward grace which makes Mr. Elliot try to spell right, instead of preferring to spell wrong, as is done in so many cases by the distinguished impurists, or advocates of illiteracy, who at present, we believe, have a majority of four to one on the nomenclatural committee."[11]

[11]Osprey, III, 1898, page 48.

In an editorial, Coues writes: "How to become a truly great ornithological author is a question which seems to agitate the mind of many a person. . . . The treatment we recommend to the patient is simple and natural; it is warranted to kill or cure the worst case. Here is our prescription:

"1. Learn to spell correctly.

"2. Learn to punctuate properly.

"3. Learn to construct sentences grammatically.

"When the patient has taken this medicine for a few years, he will either be dead or in a fair way to recovery. In the latter event, the rest is easy, as follows:

"4. Find out something that nobody else knows about birds.

"5. Write it legibly.

"6. And send it to *The Osprey*.

"If the Archangel Gabriel were to send us the glad tidings of salvation on both sides of the paper we should decline his article with thanks, and tell him that is no way to blow his horn. . . . One trouble with Audubonians seems to be that there are too many inspired idiots among them, who fancy they have a God-given mission not to hide their light under a bushel. The shotgun people are mostly made of sterner stuff; they are realistic and can be cultivated, educated, and really helped in various ways. But the opera glass fiends! They always live too near the great heart of nature to know anything of her head or hands, or do a stroke of sensible work, even to protect the birds. . . . One woman wrote to say she was so unhappy because the cats in her neighborhood killed birds. We were going to write back and suggest that she collect the murderous felines and read the Audubon circular to them; but we restrained ourselves and advised her to feed the cats."[12]

In another editorial he takes up the much agitated question of bird protection and destruction. He says: "We [*The Osprey*] are asked to . . . state whether we stand for the Protection of birds with a big P, or the Destruction of birds with a big D. . . . We can put the whole thing in a nutshell, which we leave to be cracked by our readers according to their inclination or ability:

"1. Birds must and shall be destroyed by the acts of God, such as stress of weather, snakes, monkeys, cats, foxes, skunks, weasels, hawks, owls, jays, and numerous other destructive natural agencies ordained by Divine Providence.

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[12]*Ibid.*, III, 1899, page 106.

"2. Birds must and shall be destroyed and deprived of their nests and eggs to any extent which may be necessary and proper for ornithological and oological purposes.

"3. Birds must and shall be destroyed for legitimate sport. . . .

"4. Birds must and shall be destroyed for economic and commercial purposes, the flesh and eggs of some birds being among the most important food products of the United States.

"On the other hand—

"5. Birds must and shall be protected from wanton, cruel, needless, unreasonable or illegal destruction of themselves or their eggs.

"Regarding the first of these propositions, *The Osprey* does not concern itself particularly with the acts of God. They are beyond the scope of this magazine . . . nor does *The Osprey* ever fly in the face of Providence. We give God credit for knowing what He was about when He made things, and for ability to mind His own business without our assistance. . . .

"Proposition 2. . . . *The Osprey* advocates the killing of birds and the taking of their eggs to any extent which may be found necessary for ornithological . . . purposes. . . .

"Our last proposition, No. 5 . . . we shrink from inflicting pain, even as we do from enduring it; we love birds with a love that sprang up in the heart of our childhood, and is fostered in our mature years as a precious possession . . . we applaud every ornithologist who kills or otherwise acquires what specimens of the birds and their eggs he needs for scientific purposes. . . ."[13]

No sketch of Dr. Elliott Coues would be complete without mention of his very valuable work in editing the journals of early explorers of the great west. It is due to him, more than to any other, that the original sources of the early explorers west of the Mississippi River are preserved. The ever-moving life of the Army acquainted him with the west in an intimate and real way. He edited the manuscript journals of Alexander Henry and David Thompson, written by them 1799 to 1814, and giving the history of the great northwest. Likewise the journals of Jacob Fowler giving his adventure from Arkansas through Indian territory from 1821-1822. Also of Charles Lapenteur, a fur trader on the Upper Missouri from 1833-1872. This was published in 1898. The account of Zebulon M. Pike's explorations through the Louisiana Territory to the head waters of the Mississippi from 1805 to 1807 was published by Coues in 1895 with full notes

[13] *Ibid.*, III, 1899, page 123-4.

and a memorial to Pike. "On the Trail of a Spanish Pioneer," describing the wanderings of Francisco Garces in the Southwest was published after the death of Coues. Coues made many long and wearisome journeys to know at first hand the wanderings of these explorers, and to locate the places mentioned in their journals.

Of all his work in editing journals of western explorers, Coues' new edition of Lewis and Clark Expedition stands first. Because of his interest and invaluable work on the Lewis and Clark journals, Dr. Coues was invited to be present at the reburial of the bones of Sergeant Charles Floyd, the only man to die on this perilous undertaking. The ceremony took place at Sioux City, Iowa, August 20, 1895. It was here that I first met Dr. Coues. During his brief stay of three days he called at our home. I remember him as a tall, well proportioned, scholarly looking man, straight as an arrow, and with dark hair, a full beard, and deep gray eyes. He was dignified but kindly. I felt at ease in his presence, but I didn't understand how he could refrain from comment on our beautiful three-months old babe; it seemed worth a trip half way across the continent to see him. He talked of the Lewis and Clark expedition like one who had been a part of it—not of the hardships and dangers, but of the aim of the expedition and its success.

On the afternoon of August 20, 1895, Dr. Coues spoke very briefly at the grave of Sergeant Floyd, located on a high and sightly bluff about two miles from the city, closing with the lines that Captain William Clark had written in his diary August 20, 1804, and probably on that very spot:

> "Died with a great deal of composure, before he died he said to me 'I am going away I want you to write me a letter'—We buried him on the top of the bluff ½ mile below a small river to which we gave his name, he was buried with the Honors of War much lamented, a seeder post with the Name Sergt. C. Floyd died here 20th of August 1804 was fixed at the head of his grave—This man at all times gave us proofs of his firmness and Determined resolution to doe service to his country and honor to himself after paying all the honor to our Decesed brother we camped in the mouth of floyd's river about 30 yards wide, a butifull evening."[14]

The Floyd Memorial Association arranged its evening program to be held at an auditorium in the city. At this meeting Dr. Coues and Prof. J. D. Butler, of the University of Wisconsin, were the speakers. Dr. Coues spoke on the Lewis and Clark expedition. He called it our national epic of exploration. His personality, his voice,

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[14]In Memoriam Sergeant Charles Floyd. Report of the Floyd Memorial Association. Prepared on behalf of the Committee on Publication by Elliot Coues. Sioux City, 1897, page 42.

his language, his knowledge, recited the epic and made it memorable to all who heard him. He closed with these words: "Thus was brought to a happy conclusion the most memorable expedition in the history of our country—one accomplished at the utterly insignificant expense of about $2500, which Congress had appropriated for the purpose, and with the loss of but a single life—that of him whom we honor today."[15]

On May 30, 1901, Mrs. Coues again came to Sioux City. We regretted that Dr. Coues could not have lived to be at the ceremony and help to dedicate the monument erected to Sergeant Floyd. The shaft commemorates not only the life of the brave soldier, but stands also as a monument to the opening of the great west by the Lewis and Clark expedition.

While in Sioux City on May 30, 1901, Mrs. Coues gave an interview to the Sioux City Journal which I quote in part:

". . . Dr. Coues had already been making some investigations regarding the enterprise [Lewis and Clark Expedition] and was glad to undertake the work of getting out the new book. . . . Papers and documents were stored away in the vaults of the [Philosophical] Society [of Philadelphia] which had not been looked at for nearly one hundred years. . . . After a tedious search he found the official data of the Lewis and Clark expedition as written by the men themselves. . . . There was not a work that Dr. Coues engaged in, in which he became so interested as in this history of Lewis and Clark. The following year, after he published the book (1893) he and I made a trip over the route taken by Lewis and Clark in their famous expedition of 1804."[16]

During his stay of three days in Sioux City in 1895, Dr. Coues was the guest of our family physician and friend, Dr. Grant J. Ross, who was in the army service for three and one-half years with Coues. On October 31, 1928, I visited Dr. Ross in his home in Sioux City. He is now 87 years old. He stands as straight as a soldier and is well preserved in all his faculties. I asked him to give me his recollections of Coues. Dr. Ross said: "Dr. Coues was, as I knew him in the army, a quick, energetic, active man; forceful and competent; a good soldier, not a very prudent man; a little rash, withal very methodical. He spoke well, was a scholarly man, a fluent and interesting talker. He was a man of ordinary size, weighing 162-4 pounds. Dark hair

[15]In Memoriam Sergeant Charles Floyd. Report of the Floyd Memorial Association. Sioux City, 1897, page 49.

[16]Sioux City Journal, May 30, 1901.

and beard, gray eyes. He was very approachable. He enjoyed nothing better than a conversation with a lone Indian. He picked up Indian dialect readily and used it quite well. The three days he spent in Sioux City he was a delightful guest in my home, and was like a friend. As a thinker and investigator he had a very active mind. He seemed not particularly interested in medicine."[17]*

After the Sioux City & Pacific Railroad came to Sioux City the bluff on which Sergeant Charles Floyd was buried was eroded, the soil being Missouri River loess. The coffin protruded and some of the early settlers moved it back about six hundred feet, leaving a complete record of the reburial which was in 1857. Sioux City grew and was extending to the bluff where Floyd is buried, and it was decided to take up the bones and preserve them in more permanent burial. Among letters from interested men was one from Dr. Coues who questioned the reburial of Floyd's skull, which he thought would be better preserved in some historical depository, but the Floyd Memorial Association decided to bury it and did so on August 20, 1895. In my interview with Dr. Grant J. Ross on October 31, 1928, I asked him about the casts of Floyd's skull which I remembered he had made at that time. The first one was placed in the museum of the Sioux City Public Library. Dr. Ross said: "I made two additional ones. One I gave to Dr. Coues, the other I sent to the State Historical Society of Iowa."

Prof. J. D. Butler, of the University of Wisconsin, attended both the reburial in 1895 and the dedication of the monument in 1901. On both occasions he brought with him the original diary of Sergeant Floyd, which was discovered in the Historical Library at Madison, Wisconsin, by Reuben Gold Thwaites on February 3, 1893. Professor Butler was a guest in our home. He told us that the American Antiquarian Society of Worcester, Massachusetts, of which he was a member, asked him to speak on Floyd's Journal. On hearing the address the society voted to print Floyd's Journal *verbatim et literatim et punctuatim*. Dr. Coues first saw this Journal when Prof. Butler showed it at Floyd's grave August 20, 1895. Coues was the latest historian of the Lewis and Clark expedition, which he published November, 1893. He regretted that he had no mention of the Floyd Journal in his new edition, and he seemed somewhat annoyed by it. It was unfortunate that it did not come to his notice before he published this edition.

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[17]Personal interview with Dr. Grant J. Ross by this author, October 31, 1928.
*Dr. Grant J. Ross died in Sioux City on April 18, 1929.

Dr. Coues was a student and thorough investigator in diversified fields. The fruits of his labors were prolific. He was a literary man, brilliant in composition, and radiating an atmosphere of culture. The world will know him best and longest as an ornithologist, but I believe that dearest to his heart was his work as historian of the Lewis and Clark Journals recording the greatest expedition of our country.

Nowhere did I find reference to the personal or home life of Elliott Coues save that "Prof. Coues was twice married; once early in life, and again in 1887 to Mrs. M. E. Bates who was well fitted to aid him in his scientific work."[18]

Of deep warm friendships little is revealed and perhaps they were not possible to one who had such a wealth of historical and scientific knowledge to give to the world. No soul can wholly reveal itself in this life, and often what lies deepest in the human heart fails of expression and hides a warmth of personality that would draw men together as individuals. We know that back of varied and tremendous expression through his writings stands the man Dr. Elliott Coues greater than all his works.

Sioux City, Iowa.

THE FLORIDA CORMORANT AS OBSERVED IN PINELLAS COUNTY, FLORIDA

BY WILLIAM G. FARGO

The following notes relative to that form of the Double-crested Cormorant (*Phalacrocorax auritus floridanus*) which inhabits the southeastern portions of the United States are from observations made during annual visits from January to May in the years 1923 to 1929. While these particular notes pertain to the mid-section of the west coast of the Florida peninsula, I have noticed no variation in the general habits of this cormorant elsewhere on the Florida coasts.

Cormorants are occasionally seen on the fresh water lakes of Florida, but I have collected none there and am not aware whether they represent the southern or the northern form. In general the Florida Cormorant is a coastal species, a bird of the salt water. They swarm throughout Tampa Bay and its tidal estuaries.

In the years 1924, 1925, and 1926 these cormorants roosted in large numbers nightly during the winter and early spring months on

[18]National Cyclopedia of American Biography, page 241.

exposed sand bars lying to the north of the entrance to Tampa Bay. In 1925 the winter roost on the bar to the south of Pass-a-Grille averaged about three thousand cormorants. About sunrise they would leave this roost in single file, the individuals about eight or ten feet apart, and separated into flocks of fifty to one hundred by longer gaps.

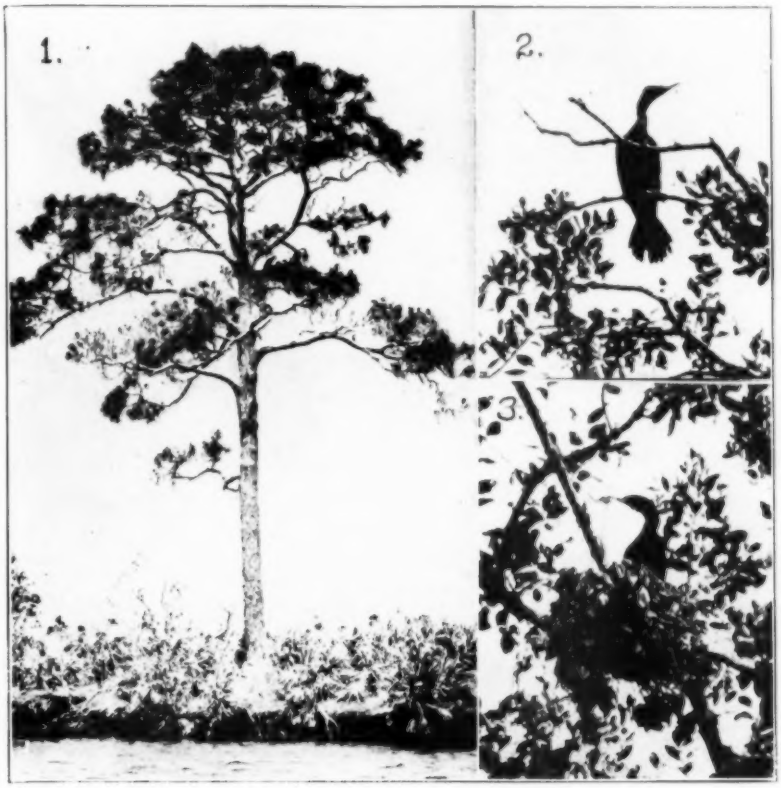

FIG. 10. 1. Pine tree on Ward's Island containing thirty nests of the Florida Cormorant. April 14, 1929. 2. Florida Cormorant with the crests raised. 3. A leafly nest of the Florida Cormorant in a Mangrove tree on Bird Key.

The practically continuous flight of the cormorants nearly every morning of this period in 1925 lasted fifteen or twenty minutes and, passing a few hundred feet off shore of Boca Ciega Bay, enabled a fair count of the birds to be made.

The time of leaving the roost varied with the weather and probably with the fishing conditions, for the cormorant does not fish much in a rough sea. The winds are strong much of the time on this sec-

tion of the Gulf Coast and choppy seas result, both in Tampa Bay and in the smaller Boca Ciega Bay. I recall one day in late winter when the cormorants remained on the roost until early afternoon, although the water was calm. Then nearly the whole roost in a dense raft drifted into Boca Ciega Bay on the rising tide. The near side of this raft of birds following the strongest tide past the town of Pass-a-Grille was within fifty yards of shore. As they drifted past the populous part of the town they would rise in the air in detached flocks and fly back beyond the rear of the raft to repeat the process. So far as I was able to observe they did little feeding that day and returned to the roost within an hour from the time they came in on the tide.

Due to encroaching civilization, and possibly other causes, the number of cormorants roosting on the bars immediately south of Pass-a-Grille has been much reduced since 1925. Only a few roosted there in 1928 and 1929 compared with previous years; perhaps as many as 800 or 1,000 on all the bars between Pass-a-Grille and Mullet Key, a distance of two and one-half miles.

The cormorant feeds principally upon fish and, like the Mergansers, can easily swallow fish that seem quite too large for its throat. The fish are mostly taken while the birds are diving or swimming below the surface. Fishermen in these waters using live bait not infrequently hook cormorants and occasionally Brown Pelicans. Usually the pelican breaks the line and escapes but the cormorant often is landed. The Red-breasted Merganser common on this coast in winter is also caught in this manner.

Various species of birds that feed on fish, and especially the diving birds fly long distances daily from their roosting places to take fish when food is scarce nearer by. Thus various gulls, terns, and Florida Cormorants may be seen returning to the roosts a half hour or more after dark at night. In these latitudes there is little twilight, darkness following soon after sunset; consequently at sunset and shortly before, the air near the roosting places is full of birds winging their way home. In a stiff wind they fly as close to the crests of the waves as possible, for the wind resistance is less there.

The "double-crest" of this cormorant consisting of two pointed tufts of feathers, one on each side of the head pointing upward and backward, begins to appear upon the heads of the adults early in March in the latitude of Tampa Bay. These tufts, in shape somewhat resembling mule's ears can be erected and lowered. The crests are not seen after about the time when mating is over and the eggs are

laid. An unmated adult appears to carry the crests for a considerable time.

Like the Brown Pelicans of the Tampa Bay region, the Florida Cormorants leave their roosting places when the nesting season arrives and when not fishing both males and females may be found in the nesting colony. There appear to be but two breeding colonies of Florida Cormorants on the Gulf side of Pinellas County, that is to say in a distance of about forty miles of coast. If there are others on the east side of the Pinellas Peninsula I have not discovered them.

The larger of these nesting colonies is on Bird Key (also called Indian Key) a federal reservation in Tampa Bay southwest of St. Petersburg. This low-lying key with only its shore rims above high tide is a little more than a half mile in length and less than half as wide. It has a central lagoon open to the north. The key is thickly covered with mangrove trees, mostly the red and black varieties. Few of the mangroves are over twenty feet in height. On this key several thousand birds have nested each spring in recent years. Among the species nesting there are Florida Cormorants, Ward's Herons, Little Blue Herons, Louisiana Herons, Black-crowned and Yellow-crowned Night Herons, American Egrets, Snowy Herons, White Ibises and Brown Pelicans. In general each one of these different species has its separate habitat although the Ward's Herons are scattered about more, as this species nests nearly throughout the year. My observations on Bird Key were made in the early spring months of 1924-25-26-27 and 1928. Without disturbing the birds unduly it is most difficult to estimate closely the number of any one species nesting there. However in 1925 approximately 1,800 pairs of Florida Cormorants nested on this key, in latter years a less number, but still large colonies.

The cormorant nests are in the upper slender branches of the larger mangroves, eighteen to about twenty-two feet above ground, and the colony has been in the years mentioned near the northwest side of the key. Mating and nest building begin late in March or early in April. The nests are rather flat and fragile mostly composed of green branches of the mangroves often with leaves attached. In the years mentioned the whole colony appeared to begin nest building about the same time, that is there was little evidence of late nesters nor have I noticed any indications of more than one brood. However later visits than those I have made in May would be necessary to determine this. Three eggs seem to make the usual clutch.

Adjoining this cormorant colony and to some extent overlapping on the east has been the American Egret colony. To the north of the egrets until 1928 has been the Ward's Heron colony, but in that year this species went to Tarpon or Bush Key lying two miles to the southeast.

All of these different species of birds appear to dwell in harmony.

On Bird Key if one moves about slowly and quietly a blind is unnecessary in studying and photographing the birds; that is if one is satisfied by approaching them within about thirty or thirty-five feet. Many times I have watched the cormorants mating and constructing nests at such distances and the birds hardly indicated that they were aware of my presence but if one climbs a tree in the colony or otherwise disturbs them they are likely to leave their nests with a rush and raft for a long time on the waters of the bay near the key.

The cormorant is a bit awkward among the slender top branches of the mangroves for the bird is web-footed and heavy but where they nest in trees with branches strong enough to bear their weight without bending, as in pines or cypresses, they seem quite agile for such a bird.

For nest construction any sticks about a half to three-fourths of an inch in diameter suffice. On Bird Key green mangrove branches broken off and with leaves attached are mostly used. Some few leaves are also laid in the rather flat nest bottom. One of the birds of a pair remains on the nest platform as soon as the start at building is made and the other brings a stick. The pair sit side by side facing the same direction, both grasp the stick and lay it in place after which they often caress by rubbing bills, and one or the other goes for another stick. If one of the pair did not remain on the nest during construction the neighboring birds would at once pilfer nest material.

Copulation takes place in the trees at the nest site or near it, apparently before the nest is begun. The male grasps the female by the feathers at the back of the neck as in the case with domestic fowl.

The other considerable breeding colony of Florida Cormorants in Pinellas County is along or near the mainland shore of the Gulf of Mexico about a mile south of the village of Ozona. In 1925 the cormorants nested in low mangroves on some small islands close to the mainland. Early in April, 1929, Florida Cormorants were observed nesting in large long leaf yellow pine trees on Ward's Island which lies some 500 feet off the mainland shore about a mile and a quarter south of Ozona. This small island about an eighth of a mile in length is in the general area where Florida Cormorants have nested and

roosted for many years. One large pine had thirty occupied nests on April 7, 1929, and several other pines had as many as twelve nests each. In all there were then about 125 nests in this colony. I visited the colony again April 14 and made photographs from a boat as close as fifty feet without causing any apparent uneasiness among the sitting birds.

The nests of these cormorants in the pines are in most cases more bulky, much deeper and in general better constructed than those in the mangroves. The reasons are evident; the upper branches of the mangroves afford a poor and unstable foundation, there are seldom suitable crotches to receive a deep nest and nest material is less plentiful in the mangrove areas. The cormorants in the pine colonies, however, exhibited the same habits in mating and nest building as described above for the occupants of the Bird Key colony.

FIG. 11. Florida Cormorant on nest of sticks at Ozona, Florida. April 24, 1929.

On April 14, 1929, I noticed from a distance about eighty cormorants apparently roosting late in the forenoon in tall yellow pine trees on the mainland in the southwest part of the village of Ozona, directly alongside the paved road that follows the shore. Upon going there I found a few nests approaching completion and a dozen or more being started. The cormorants would fly to the ground, grasp sticks and twigs, often with the long gray moss (*Tillandsia*) attached and fly back to the trees. Passing cars and people afoot within a hundred feet caused little concern.

On April 24, 1929, I again visited this mainland cormorant colony and found about twenty-five nests occupied and more under construction. Numerous photographs were made at distances of forty or fifty feet without recourse to a blind, using a 19-inch focus lens. The ground beneath the pines, being nearly clear of under-growth and all in bright sunlight, made one far more conspicuous than in a densely shaded mangrove colony. When I approached nearer than forty feet a few birds left their nests without particular alarm and perched in nearby trees. As I moved away after photographing, two Fish Crows (*Corvus ossifragus*) came into the colony and approached the unprotected nests for the purpose of stealing eggs, but by the time I had reached the highway, a hundred feet off, these nests were again occupied by the owners.

On Bird Key if visitors land in the company of the warden and are not quiet and slow moving the birds of all sorts become frightened and leave the nests. This is always a signal for several waiting Fish Crows and vultures—both the Black Vulture and the Turkey Buzzard— to start an egg hunt. In the Ozona colonies the birds are more accustomed to seeing people nearby and, being unharmed by them, have gained confidence.

This confidence of the birds of various species in the presence of numerous people has become a common occurrence in Florida. Water birds swarm along shores where traffic passes the nearest. Herons and egrets alight on docks and take bait minnows from the wells of anchored motor boats. Guns in the hands of boys and idle men are much scarcer than in even quite recent years and the birds are gaining confidence.

The cormorants only frequent Bird Key during the nesting season and the same is true of the herons and pelicans that nest there, but the cormorant rookeries near Ozona also serve as roosts at least during the winter and spring months. I have not been there in summer. In consequence of this more or less continual use of the trees by cormorants they become white-washed by the excrement and ultimately are killed. I have observed no cormorants nesting in the dead trees.

Secluded bars and beaches are scarce in the vicinity of Ozona which probably accounts for the tree roosting habit of the cormorants of that colony. The cormorant generally roosts in close formation, whether it be on a bar, beach, or in trees. This close roosting habit of cormorants and their liking for isolated roosting and resting places off shore has been taken advantage of by collectors of guano along

the gulf coast of Florida who have built tight plank platforms on piles at intervals from Tampa Bay to Cedar Keys, as I have observed, and very likely beyond those limits.

The cormorant although heavy of body and short of wing is an easy and swift flier. The flatness of the body, large tail area, and the shape of the head and neck result in a good "stream-line" proportion, all contributing to the ease of its flight. I never have seen a cormorant soar. The Anhinga whose body from the point of view of flight characteristics much resembles that of the cormorant is both swift in flight and accomplished in soaring. Anhingas often may be seen one or two thousand feet in the air over their cypress swamp retreats circling about on set wings as gracefully as any hawk or vulture. Pelicans, especially the White Pelicans, do the same thing occasionally.

In the cormorant nesting colonies the young, like young herons, will disgorge partly digested fish when alarmed by the presence of man, and the large size of such fish often is surprising.

JACKSON, MICHIGAN.

SPRING BIRD NOTES FROM RANDOLPH COUNTY, GEORGIA

BY FRANCIS HARPER

Ornithological literature for southwestern Georgia is so meager that even such a slight contribution as the present one may be helpful in filling some gaps in our knowledge of bird distribution in that part of the state. As far as I am aware, there is no general bird list available for any part of the "Red Hills" region of Georgia. This is a physiographic area or natural division extending across the state, a little below the fall line, from Augusta to Fort Gaines (and also into South Carolina, Alabama, and Mississippi). It averages about thirty miles in width, and includes the greater part of Randolph County.[1]

I happened to spend the period from March 16 to April 18, 1921, on a farm about seven miles northeast of Cuthbert, the county seat. Meanwhile, though the amount of time devoted to ornithological observations was rather limited, I kept a daily list of the birds found in the dooryard and in the near-by fields and woods. This was a time of year when some of the winter residents still remained, while transients and summer residents were arriving from the south.

[1]For a map and a further description of this region, see R. M. Harper, *School Sci. and Math.*, vol. 18, no. 8, Nov., 1918, p. 704; also *Georgia Hist. Quart.*, vol. 6, no. 2, July, 1922, p. 101.

The following list of fifty-three forms is made up approximately as follows: permanent residents, 29; winter residents, 9; summer residents, 13; transient visitants, 2.

Bob-white. *Colinus virginianus virginianus.* A flock of half a dozen seen, April 4.

Mourning Dove. *Zenaidura macroura carolinensis.* Seen or heard frequently, March 17 to April 16. Usually only one or two were noted at a time, but on April 3 there were fifteen in a single pasture.

Turkey Vulture. *Cathartes aura septentrionalis.* A flock of half a dozen on March 24 and 25, and a single bird on April 11.

Black Vulture. *Coragyps urubu urubu.* About five flocking with half a dozen Turkey Vultures, March 25. One or two seen on other days, up to April 17.

Marsh Hawk. *Circus hudsonius.* A single bird near Cuthbert, April 18.

Florida Barred Owl. *Strix varia alleni.* One seen in a creek swamp, March 20; one hooting, April 5.

Belted Kingfisher. *Ceryle alcyon alcyon.* Noted a few times, March 22 to April 6.

Southern Hairy Woodpecker. *Dryobates villosus auduboni.* One, April 6.

Southern Downy Woodpecker. *Dryobates pubescens pubescens.* Several, March 20 and April 3.

Yellow-bellied Sapsucker. *Sphyrapicus varius varius.* One heard, March 26.

Red-headed Woodpecker. *Melanerpes erythrocephalus.* Single birds seen fairly often, March 20 to April 14.

Red-bellied Woodpecker. *Centurus carolinus.* Only a few seen, March 18 to April 16. One on the corner of a smokehouse gradually hitched down to a hen's nest in a box, where it pecked away at something, and was seen to "lick its chops." On going to investigate, I found in the nest a spoiled, broken egg. It may have been broken originally by some other agency than the woodpecker, but the latter was evidently feeding on it.

Flicker. *Colaptes auratus* subsp. One, March 18.

Kingbird. *Tyrannus tyrannus.* One or two seen frequently, April 5 to 16.

Wood Pewee. *Myiochanes virens.* Several, in song, April 17.

FLORIDA BLUE JAY. *Cyanocitta cristata cristata.* These familiar and noisy birds of the dooryard were seen in small numbers almost daily, March 17 to April 17. One was carrying nesting material on April 4. On one occasion several Blue Jays and English Sparrows worried a half-tame young Gray Squirrel in an oak tree in the yard. Two of the jays were collected.

CROW. *Corvus brachyrhynchos* subsp. Found in small numbers, March 18 to April 15.

SOUTHERN MEADOWLARK. *Sturnella magna argutula.* Small numbers noted, March 20 to April 3; a flock of about twelve on March 21.

ORCHARD ORIOLE. *Icterus spurius.* A male in song noted nearly every day, April 11 to 16.

HOUSE SPARROW. *Passer domesticus domesticus.* Some nearly always in evidence.

VESPER SPARROW. *Pooecetes gramineus gramineus.* Small numbers recorded, March 17 to April 2. Since these birds were apparently not in song, is it not possible that the males had already departed for the north, and that only females remained at this season?

WHITE-THROATED SPARROW. *Zonotrichia albicollis.* Four or five in a band noted on several occasions, March 22 to April 5.

CHIPPING SPARROW. *Spizella passerina passerina.* A few silent birds seen from March 20 to April 7, including a flock of about ten on April 6. Finally one in song on April 17. To judge by the distribution of the species in Alabama (cf. Howell, "Birds of Alabama," p. 239), Randolph County is probably close to the southern limit of its breeding range in Georgia.

FIELD SPARROW. *Spizella pusilla pusilla.* Single birds seen, March 20 and April 6.

BACHMAN'S SPARROW. *Peucaea aestivalis bachmani.* A mile collected on March 26 in an old field; another heard singing on April 6.

CHEWINK. *Pipilo erythrophthalmus erythrophthalmus.* A male or two, with reddish eyes and with the call-note of northern birds, found on April 5 among deciduous undergrowth in pine woods. Probably the form described by Howell (*Proc. Biol. Soc. Wash.*, vol. 26, 1913, p. 202) as *canaster.*

CARDINAL. *Cardinalis cardinalis cardinalis.* One or more noted rather frequently, March 16 to April 10.

SUMMER TANAGER. *Piranga rubra rubra.* A few noted, April 10 to 17.

Purple Martin. *Progne subis subis.* Small numbers present, March 25 to April 18.

Cedar Waxwing. *Bombycilla cedrorum.* Flocks of four to thirty individuals seen rather commonly, March 30 to April 15.

Loggerhead Shrike. *Lanius ludovicianus ludovicianus.* One or two were seen very frequently from March 18 to April 18. A song heard on March 19 strangely suggested the Rusty Blackbird's note. On March 25 a nest in a pear tree in a garden contained four eggs. It was situated near the trunk at a height of eight or ten feet above the ground. It was composed in part of grass, and was lined with chicken feathers. There was said to have been a nest in about the same place the previous year. A sitting bird was noticed on March 30, but within a week thereafter the nest was empty—possibly rifled by Blue Jays.

In flight the Loggerhead's tail shakes vertically, reminding one of some of the European wagtails (*Motacilla* spp.).

Boys of the neighborhood called this species "French Mocker," being apparently quite unacquainted with the name of "Butcherbird."

Yellow-throated Vireo. *Lanivireo flavifrons.* Several noted in song, April 3 and 7.

White-eyed Vireo. *Vireo griseus griseus.* Single birds seen, March 20 and April 6.

Black and White Warbler. *Mniotilta varia.* A few birds, in song, March 20 to April 6.

Parula Warbler. *Compsothlypis americana americana.* Single birds, in song, March 20 and 27, and April 3.

Myrtle Warbler. *Dendroica coronata coronata.* Noted from March 17 to April 6, usually in very limited numbers, though about twenty were seen on March 20 and again on April 3. Up to March 20, at least, no males in breeding dress were observed. A specimen was collected on April 1.

Yellow-throated Warbler. *Dendroica dominica dominica.* Single birds, in song, March 20 and 22, and April 3.

Pine Warbler. *Dendroica vigorsi.* Noted commonly from March 20 to April 17; in song throughout this period.

Palm Warbler. *Dendroica palmarum palmarum.* Individuals and small bands of not more than five individuals, April 6 to 18. Apparently all of those observed, including a specimen collected, were

of the present subspecies. On April 27 one sang a sprightly, gurgling lay from a perch about forty feet up in an oak.

LOUISIANA WATER-THRUSH. *Seiurus motacilla.* One or two noted on a number of days from March 20 to April 17; in song throughout this period, and very likely nesting by the last-mentioned date. The birds frequented a patch of lowland woods, with a small stream running through it. If they actually did breed here, it would probably constitute the southernmost record for the state.

FLORIDA YELLOWTHROAT. *Geothlypis trichas ignota.* Song heard on March 16 and 20. To judge by the migration dates in Alabama (cf. Howell, "Birds of Alabama," 1924, pp. 317-320), *ignota* would be the form most likely to occur here in the middle of March.

HOODED WARBLER. *Wilsonia citrina.* Present in small numbers, and singing, March 27 to April 17.

MOCKINGBIRD. *Mimus polyglottos polyglottos.* Very common; seen and heard singing practically every day, March 17 to April 18.

BROWN THRASHER. *Toxostoma rufum.* A few observed, March 20 to April 18.

CAROLINA WREN. *Thryothorus ludovicianus ludovicianus.* Common, March 17 to April 6.

FLORIDA WHITE-BREASTED NUTHATCH. *Sitta carolinensis atkinsi.* One heard, March 20.

BROWN-HEADED NUTHATCH. *Sitta pusilla.* Noted a few times from March 29 to April 17.

About 5 P. M. on April 10 I noticed a number of Brown-headed Nuthatches among some pines in an old field. Presently three or four of them huddled together a couple of feet from the tip of a long limb thirty-five feet from the ground. The limb was well provided with twigs and needles. Then a couple of others began visiting those lined up on the limb, and feeding them. I was astounded to realize that fledglings were abroad thus early in the season. Sometimes the adults passed over the food from a perch on the same level, but about as often as not they clung to the under side of the limb in acrobat fashion and fed the youngsters from below.

By degrees several more came and lined up on the limb, till there were finally six, if not seven, all touching each other in close array. Some faced in one direction, some in the other. They kept up a gentle, musical twittering. The adults often gave their loudest call (a nasal, twanging *knee-tnee; knee-tnee-tnee*) as they searched

the pine cones, limbs, and trunks for food. They also gave, while so engaged, a much lower, conversational note: *pik*. Once in a while one of them would hammer some piece of food on a limb, in the manner of one of the larger species of nuthatches.

Up to about 5:30 P. M. the old birds fed the youngsters assiduously, returning every half minute or so. Then, when the latter were pretty well quieted, though the sun had scarcely set, the old birds disappeared for some minutes. Eventually they returned, but did not go to the young ones, merely feeding industriously in the adjacent trees. All this was so like a human family, where the babies are given an early supper and put to bed, after which the parents can attend to some of their own wants.

I waited till after six o'clock to see if the adults might not join their brood, but apparently that was not their intention. Toward the last one of them flew to the same limb a couple of yards away, and thereafter I lost sight of both of them, but felt quite certain that neither joined the group of young ones. It was then after sunset, and the birds were undoubtedly established for the night. It seemed strange that a hole-nesting species should roost thus in the open.

TUFTED TITMOUSE. *Baeolophus bicolor*. A few, March 20 to April 17.

CAROLINA CHICKADEE. *Penthestes carolinensis carolinensis*. A few, March 20 to April 3.

RUBY-CROWNED KINGLET. *Regulus calendula calendula*. Noted in song on a number of days from March 20 to April 6.

BLUE-GRAY GNATCATCHER. *Polioptila caerulea caerulea*. Several noted, March 17 to April 3; in song on the first-mentioned date.

HERMIT THRUSH. *Hylocichla guttata pallasi*. One seen, March 26.

BLUEBIRD. *Sialia sialis sialis*. Seen very frequently, but in small numbers, March 17 to April 12. A nest in a fence-post contained four eggs on March 30.

NATICK, MASS.

THE WILSON BULLETIN

Published at Sioux City, Iowa, by the Wilson Ornithological Club.

The present editorial organization is as follows: T. C. Stephens, Editor-in-Chief, Sioux City, Iowa; Myron H. Swenk, University of Nebraska, Lincoln, Nebraska; Albert F. Ganier, Nashville, Tennessee; Alfred M. Bailey, Chicago Academy of Sciences, Chicago, Illinois; R. D. Hissong, Sioux City, Iowa.

The subscription price in the United States is $1.50 a year, and 50 cents a number; in all other countries of the International Postal Union the price is $2.00 a year, and 60 cents a number. Subscriptions and orders for single copies should be addressed to the Secretary, Dr. Jesse M. Shaver, Peabody College, Nashville, Tennessee, U. S. A.

EDITORIAL

THROUGH SOME INCIDENT, now forgotten, we were led to speculate on the selection of the ten "best" bird books for the private library of an American amateur ornithologist. Just what is meant by the term "best" we may have to leave undefined. It does not mean most scientific, for often the most scientific papers are of the least use to the average bird student. It does not mean most useful, for sometimes the bird student reads for pleasure as well as for instruction—at least he may wish to enjoy his reading. And yet, we are selecting the books for the serious student of ornithology, and will overlook the works of the literary interpreters of nature. What we probably want is a small collection of bird books that will give the maximum amount of information about birds, and the maximum amount of pleasure in reading it.

In selecting such a list of books we have found it necessary to establish certain criteria—to make a sort of score card. After considerable alteration and elimination we have settled on five points, or qualifications, upon which to score the books. 1. Authoritativeness. The author must have professional standing in order to assure confidence in his statements. 2. Readability. So many books are poorly written, and so many are well written, that we may as well choose on this score. 3. Availability. We should not select for this purpose books that sell at a high price, nor out-of-print books that can not be easily obtained. 4. Variety. The ten books chosen should cover as many phases or branches of ornithology as possible, and avoid duplication of authors. 5. Utility. This is a relative term, and might not mean the same to every individual. Nevertheless, each from his own standpoint must consider the value on this point.

The writer's judgment may be in error, and he may be unacquainted with better books for such a list; but such as it is, here is the list:

1. Handbook of Birds of Eastern North America. By Frank M. Chapman. For classification and description.
2. A Popular Handbook of the Birds of the United States and Canada. By Thomas Nuttall. For description of habits, especially of song. Rather expensive in the original, but a cheaper reprint in one volume is obtainable.
3. Michigan Bird Life. By Walter B. Barrows. For general information and because of low cost. There are several other equally good state books, but this one is selected because of the centrality of the region treated.
4. Territory in Bird Life. By H. Eliot Howard. Bird life is here interpreted from a new angle, which will be enlightening to the average student of birds. It is also an interesting example of logical thinking.

5. The Practical Value of Birds. By Junius Henderson. As a treatise on economic ornithology. It is difficult to choose between this and Forbush's "Useful Birds and Their Protection."
6. The Migrations of Birds. By Alexander Wetmore. As an account of this important habit of birds.
7. Home Life of Wild Birds. By Francis H. Herrick. For information on the domestic habits of birds.
8. Birds and Their Attributes. By Glover M. Allen. As a general discussion of birds and their habits.
9. Game Birds, Wild Fowl and Shore Birds. By Edward Howe Forbush. Besides giving information on many of the wild fowl and game birds, this book gives a history of the most important extinct species and an excellent exposition of the principles of bird conservation.
10. The A. O. U. Check-List. If the new edition of the Check-List is not published within the next five or six years we may have to strike it from the list. But when published it will be quite essential to every student of birds in this country.

Of course, everyone can suggest changes in this list. And there are various state publications, government publications, and periodicals which everyone should have. There should be a history of ornithological science in such a list; but unfortunately there is none in English.

Our readers will observe that this issue of the BULLETIN contains an extra eight pages. This is made possible by contributions from two authors amounting to about forty-five dollars.

It is desired to compile a list of wild fruits and seeds which are eaten by native birds. Any readers who have some random notes which they will wish to put into a common pool will greatly oblige by sending to the Editor the data, including the name of the plant (seed, berry, fruit, etc.), name of bird, place, date, and name of observer. Such data should be repeated as many times as different observations were made, even for the same species of bird.

Senator McNary has introduced Senate Bill 2015 which provides for a reduction in the bag-limit on game birds. The daily limit provided for ducks is fifteen, and for geese, four. other game birds are reduced proportionately. Representative Haugen will introduce the Bill in the House.

Those who wish to have a room at the Headquarters Hotel should secure a reservation at least a week or ten days in advance of the meeting. The Des Moines Audubon Society will hold the annual bird census on Thursday, the 26th. They invite visitors to the W. O. C. meeting to come a day earlier and attend the field trip. Notify Mrs. J. E. Stewart, 1245 37th Street, Des Moines, Iowa.

THE DES MOINES MEETING

The Sixteenth Annual Meeting of the Wilson Ornithological Club will convene in Des Moines,, Iowa, December 27-28, 1929, in conjunction with the American Association for the Advancement of Science.

The reading of papers will form a prominent feature of the meetings. All members are earnestly requested to contribute, and to notify the Secrteary as to the titles of their communications, the length of time required for thir presentation, and whether they will be illustrated by lantern slides or films, in order that complete arrangements may be made. Meetings will be held in the Lecture Room of the City Library, (three blocks from our hotel headquarters) from 9:00 A. M. until 5:00 P. M.

The Des Moines Audubon Society has arranged an excellent exhibition of bird paintings at the library for this meeting. The Brown Marine Museum, at the Brown Hotel, two blocks from Savery Hotel, invites all members to visit this museum and examine the Marine exhibits. These include water and shore birds. The annual banquet of the Wilson Club will be held at Younker's Tea Room, Saturday evening, December 28, 1929.

The headquarters of the Wilson Club will be at Hotel Savery III, where rooms may be secured at the following rates:

Single rooms with bath, $2.50, $3.00, $3.50, $4.00, or $5.00 per day. Single rooms with bath and double bed, $4.00, $4.50, $5.00, $5.50, or $6.00 per day. Rooms with bath and twin beds, $5.00 or $6.00 per day. Reservations should be made well in advance.

Special Railroad Rates

A special railroad rate is made to all members of organizations affiliated with the American Association for the Advancement of Science. Since the Wilson Club is thus affiliated, this special rate applies to its members. To secure this special rate, purchase a one-way ticket to Des Moines, Iowa, and secure from the agent a certificate to the annual meeting of the American Association for the Advancement of Science. Do not purchase a ticket without securing this certificate. This certificate must be presented to the proper official at the convention for validation. After validation, the certificate entitles its holder to a return ticket at one-half the regular rate.

Each member is requested to recommend to the Secretary the name of at least one new member for election to the Wilson Club.

Jesse M. Shaver, *Secretary.*

George Peabody College for Teachers,
Nashville, Tenn., October 28, 1929.

GENERAL NOTES

Conducted by M. H. Swenk

The Starling in Michigan.—In the March, 1929, number of the WILSON BULLETIN (p. 62), Mr. E. C. Hoffman proposes to prepare a distribution map of the Starling (*Sturnus vulgaris*) and suggests that reports concerning the appearance of these birds be sent in. I lived in Grand Rapids, Michigan, from 1921 to 1928, and noted, from time to time, reports of the presence of the species in the neighborhood of Detroit and, later, at Battle Creek. I do not recall any report of a western extension in the Lower Peninsula beyond the point last named. In February, 1927, about a dozen Starlings were present in East Grand Rapids. The birds congregated at the water tower, the lower part of which was encased with wood. The perforations in this casing made by woodpeckers served as roosting places for the Starlings. I saw them again in this place in 1928, but do not know whether they resorted to the locality again this year.—EDWARD R. FORD, *Fort Lauderdale, Fla.*

Nesting of the European Starling in Butler County, Ohio.—On April 4, 1929, I noted a pair of European Starlings (*Sturnus vulgaris*) gathering material for a nest. The nest was in an old catawba (*Catalpa bignonoides*) tree five feet from the ground. Both birds assisted in gathering the nesting material. The birds were identified by their brownish black color and yellow bills. This is, I believe, the first record of their nesting in this county.—C. K. LLOYD, *Oxford Ohio.*

The European Starling at Urbana, Illinois.—In the March, 1928, issue of the WILSON BULLETIN I published a short note under the above title, in which I offered sixteen new records for the European Starling at Urbana, Illinois, these covering a period of two years. At the time of that publication a Starling was to me a most interesting find, a bird rare enough to warrant enthusiasm. The manuscript of the 1928 note left my hands the middle of December, 1927. Beginning in February, 1928, the number of Starlings in this vicinity began to increase, and I added twenty-two new records during February, March, and April of 1928. Then the number of reports of Starlings dropped off materially until November, when the increase resumed. Since November, 1928, I have lost all track of Starling records in this vicinity, as there have been so very many of them. Now (March, 1929), the species is so common here that I can not spend two hours in the field without finding from ten to fifty Starlings. When I published my first note just a year ago, I fully expected to publish a yearly account of new central Illinois records. I hereby resign that intention. Central Illinois is no longer "very close to the periphery of the range of the Starling." The vanguard of the westbound Starling army has passed me by.—A. R. CAHN, *University of Illinois, Urbana. Ill.*

The Starling at New Hampton, Iowa.—On March 31, 1928, a Starling (*Sturnus vulgaris*) was taken in a sparrow trap belonging to Louis Fliger. This is the first record, so far as I know, for northeast Iowa, and follows very closely on the taking of individuals at Oxford, Iowa, by Prof. Kubichek, of Coe College, Cedar Rapids. Last summer (1928) I drove from here to Columbus, Ohio, during the last week in June, and the first Starlings seen as I went east were at Greenfield, Indiana.—CHAS. J. SPIKER, *New Hampton, Iowa.*

The European Starling at Des Moines, Iowa.—On March 21, 1929, a pair of European Starlings (*Sturnus vulgaris*) were observed by Mr. and Mrs. A. W. Lee of 4323 Ingersoll Avenue, Des Moines, feeding in their backyard and around the Purple Martin house. Although neither observer was familiar with the Starling they were able to furnish such an accurate description of the pair to Mr. A. J. Palas that he felt there could be no doubt as to their identity.

The Starlings remained only during the one day and were described by Mr. Lee as "larger than Purple Martins, purple in color with their backs shaded brownish and had very prominent bills, large at base, yellow in color. The notes were different than I had ever heard, being loud, harsh whistles."—PHILIP A. DUMONT, *Wilton, Conn.*

The Starling at Hillsboro, Ohio.—On November 15, 1928, the Starling (*Sternus vulgaris*) appeared at Hillsboro. In a few days the number increased to seven, and on December 31 to thirty. This number remained until March 1. The regularity of their movements was very marked. At 8:30 A. M. they appeared in an oak tree and after chattering a few minutes, they flew to a clump of locust trees and then off to their feeding ground, returning by the same route about 4 P. M. and then to their roosting place. After March 1 the group varied in numbers and in their movements.

On May 1 I noticed a pair in a maple tree. They were trying to gain possession of an abandoned Downy Woodpecker's nest occupied by a Red-headed Woodpecker. The male sat on a limb near by while the female explored the cavity, passing in and out frequently. The Redhead sat in a nearby tree just looking on. During the investigation a Flicker leaned into the opening and gave the Starling two hard thrusts with his stout bill. The Starling slid out and the Flicker left as suddenly as he had come. The Starlings gained possession more by a continued persistence than by physical force. They spent several days in carrying out the old material. They would go to a limb near by and drop it very leisurely. On May 15, the nest was abandoned. Probably the eggs were destroyed by squirrels. Several days afterward the female visited the nest. I have found three nests in the cavities of trees about twelve feet from the ground, and have seen several carrying food to their young. They stay in pairs or groups of four to eight. They are general this summer but not common. They do not seem to affect the bird life and the other birds do not bother them. The first one observed here was a stray one in early January of 1928. It stayed in a neighbor's garden and our yard for several days.—KATIE M. ROADS, *Hillsboro, Ohio.*

Additional Records of the Starling in Michigan.—As to records of extensions of the range of the Starling (*Sturnus vulgaris*) asked for in the March, 1929, number of the WILSON BULLETIN, I have the following to give: At Three Rivers, St. Joseph County, I first saw a Starling on August 22, 1925. From what I have seen at this locality, it appears that they are a resident and very likely nest there, as I found them during the months of March to October, inclusive. The largest number seen at one time at this locality was seventeen on September 20, 1925. At Schoolcraft, Kalamazoo County, I first saw Starlings on October 13, 1925, three being seen. It is perhaps a resident and breeding bird at that locality. I found them there during the months of July, October, and December on my few visits at that locality. The largest number seen at one time was a

flock of twenty-five on July 29, 1927. Although this species was reported from Vicksburg, Kalamazoo County, Michigan, before I first saw them there on my visits, I found Starlings there in February and saw some feeding young in May. The first that I happened to see at that locality were three on February 2, 1926.

Here in Luce County, near McMillan, I first saw Starlings on April 22, 1928, two being seen. A pair nested in an old Flicker cavity. They may not be a resident yet, as I have only seen them during the months of March to July, inclusive, and September and October. Very likely some were near this locality in August, but I failed to find any. This year (1929) three pairs started nesting in bird houses. Two were blown down by a strong west wind this month (May) and of course left, and the other pair seems to have gone with them. The two nests that were blown down contained eggs. My largest number seen in a day at this locality is fourteen on March 27, 1929.—O. M. Bryens, *McMillan, Mich.*

The Snowy Egret in Stark County, Ohio.—On the afternoon of June 16, 1929, three observers noted a Snowy Egret (*Egretta candidissima candidissima*) in a small cat-tail pond near Wilmot, Ohio. Ae we stood near the edge of the pond the beautiful white bird was clearly identified, both with and without our 6x binoculars. While we watched the bird it was constantly harried by two Red-winged Blackbirds that followed as it circled above the pond, nipping it many times. After its third flight the Egret flew away and did not return, as we learned later. We inquired from the owner of the pond when the Egret had arrived there and he told us it was the morning of our observation, June 16.—May S. Danner, *Canton, Ohio.*

The Turkey Vulture in Iowa.—The Turkey Vulture (*Cathartes aura septentrionalis*) is a rather rare rare species in the Sioux City, Iowa, region. On a tour of the Iowa State Parks made during the latter part of August, 1928, we usually found these birds in the vicinity of the heavy timber of the parks. The largest number seen at one time was twelve, near Adel in the middle of the state. The first record was August 21 at Dolliver State Park in Webster County. Other records are: August 28 at Palisades State Park in Linn County; August 30 near Tracy in Marion County; August 31 near Winterset in Madison County; September 1 at Adel in Dallas Country; and September 2 and 3 at Ledges State Park in Boone County.—William Youngworth, *Sioux City, Iowa.*

An Early Nesting of the Killdeer.—On April 4, 1917, a nest of the Killdeer (*Oxyechus vociferus*) with four eggs was found, placed in the charred remains of a burned brush-pile. So perfect was the blending of the color of the eggs with the debris that had I not seen the bird on the nest, I would not have found it. On March 29, 1921, a Killdeer was flushed on a small knoll in a rocky pasture traversed by small spring-fed streams. She feigned dying for a couple of minutes, and then suddenly flew to a near-by field. In searching for the nest where she had risen we found four eggs, all disarranged. On April 13 and 15 there were only three eggs.—Katie M. Roads, *Hillsboro, Ohio.*

The Pine Siskin in Nebraska in 1928-29.—Following the commonness of the Pine Siskins in southeastern Nebraska in the spring of 1928, when they nested at Omaha, Fairbury, and Hastings, and probably did so also at Lincoln (see Wilson Bulletin, XLI, pp. 88-89), they disappeared from this region late in May or early in June. None were then seen until the following December. On

December 6, 1928, Mrs. L. R. Button found Pine Siskins numerous on McLain's Island in the Platte River near Fremont. Six of them were seen on the Island as late as December 23, and an occasional one occurred in the city of Fremont during the winter. On December 28, the Misses Ellsworth and others noted ten of them in the Fontenelle Forest near Omaha. The Brooking Bird Club at Hastings noted one there on January 1, 1929. Mr. C. S. Ludlow saw a flock at Red Cloud on February 5, and the members of the Fairbury Nature Study Club saw fifteen of them on February 22.

Late in February and early in March there was a reappearance, or an increase in numbers, of the Pine Siskin in southeastern Nebraska. Mr. C. S. Ludlow saw eight of them at Red Cloud on March 1, and by March 15 a flock of twenty was present there. The first ones seen at Hastings were on March 4, and they were still present there on May 18, according to the records of the Brooking Bird Club. Mrs. H. C. Johnston reported the first ones at Superior on March 16. At Fairbury Mrs. H. F. Hole reported them paired in her yard on March 20.

At Lincoln, the first ones were seen—five of them—on February 28 by Miss Louisa Wilson, who saw others on March 1 and 7. The writer first noted them on the College of Agriculture campus on March 14, and Miss Wilson found them commonly in another part of Lincoln on March 16. By April 27 they were present in pairs in the vicinity of the College of Agriculture campus. The monthly mean temperature for March, 1929, was 42.6°, or 5.1° above normal. For April it was 54.2°, or 2.7° above normal. For May it was 60°, or 1.7° below normal. According to the conclusions reached on pages 91 and 92 of my paper in the June, 1929, WILSON BULLETIN, there might have been attempts to nest by the Pine Siskins in March, and probably would be nesting in May. Surely enough, Mrs. Swenk and the writer found a nest about thirty feet up in a spruce tree on the College of Agriculture campus on May 5. The birds were seen at the nest on May 17 and May 19, but on May 26 had disappeared. This constitutes the twenty-second breeding record of the Pine Siskin in Nebraska, and further corroborates the relation between nesting and spring temperatures pointed out in the paper above mentioned.—MYRON H. SWENK, *Lincoln, Neb.*

Does the Great Horned Owl Have a Poor Memory?—During latter December, 1928, and early January, 1929, Mr. E. C. Rosenberry, of Enola, Cumberland County, Pennyslvania, lost chickens and guinea fowl almost every night. He could not find the culprit, but inferred that a bird of prey was taking them, since no footprints could be found. On the night of January 2 he placed a steel trap on a post near the poultry yard. A few feathers had been found at the base of this post, suggesting that the victims had been carried there. On the following morning the trap was gone; evidently it had not been fastened securely. Another trap was wired to the post and set. On the morning of January 4, a large female Great Horned Owl (*Bubo virginianus virginianus*) was found in the trap, caught by its left foot. On the right foot was the other trap, its chain dangling. The bird was brought to this office for identification.

According to my experience certain species of birds, Crows for instance, would not have made the mistake of returning so promptly to a perch where they had encountered a trap. But the owl, either poor of memory, or excessively hungry, had returned within about twenty-four hours, though she bore upon her

foot a constant reminder of the disagreeable experience. It is probable that hunger and the memory of source of sustenance are respectively stronger and more accurate in this muscular, bold creature than any recollection of pain or inconvenience which may have been caused at or near the source of food supply.—GEORGE MIKSCH SUTTON, *Game Commission, Harrisburg, Pa.*

The Breeding Range of the Black-necked Stilt.—The breeding range of the Black-necked Stilt (*Himantopus mexicanus*) has been steadily increasing throughout different parts of southern and central Florida during the last few years. Where it was not found at all a few years ago it now breeds. In 1909 I found these birds nesting at Kissimmee and also at Lake Kissimmee on Rabbit Island. In 1915 they bred in numbers at Lake Harney, Seminole County. These places are still used as breeding places to the present date, May, 1929. They breed at Marco Island, some of the Keys, Puzzle Lake, Seminole County, Merritt's Island, along the St. John's River between Sanford and Lake Harney, and at Geneva Ferry.

The latest places discovered were at Turkey Hammock, Osceola County, which is where the Kissimee River begins at the south end of Lake Kissimee. About a dozen pairs were found evidently breeding, judging from their behavior, by Messrs. Arthur H. Howell and W. H. Ball, and me, on May 12, 1929. We also found four breeding pairs at Alligator Bluff, which is along the Kissimee River, on May 11, 1929. In March, 1908, March, 1910, and in 1912, I had covered this same territory and failed to see Black-necked Stilts in these two places. I could not have overlooked them had they been here.

Since the lowering of Lake Okeechobee, the river has been far below its normal level, thus leaving exposed mud flats, suitable to the needs of this bird and it has taken advantage of conditions offered.

Three other new breeding places have been just discovered, and eggs collected. A few pairs were found in May, 1929, and one nest with four eggs collected five miles west of Indian River City, Brevard County, in a brackish swale between St. John's River and Indian River. On May 15, 1929, Mr. H. Redding sent me two sets of three eggs and two sets of four eggs. Three sets were collected from a small colony on the sandy shores of Lake Winder (part of St. John's River), Osceola County. The eggs were slightly incubated, and some were fresh. A fourth set was taken close to Lake Washington at the "Jams." The eggs of this set were half incubated. The Indian River district and the latter are both new breeding localities.

A wide jump was made when the birds were found breeding at Lake Conway, five miles south of Orlando, Orange County, in May, 1927, for the first time. No eggs or young were seen, but their actions betrayed them, and it was not until May, 1928, that Messrs. J. C. Howell, Jr. and Wray H. Nicholson found two sets of three eggs each at this place. The author first saw them in 1927. At the most the birds could not have come earlier than 1926. Again in 1929, I saw the Stilts there on May 24, 1929. Only four pairs have ever been seen. This is another instance of the lowering of the lake, and causing mud banks to form. The birds breed several hundred yards from a main highway, where a meadow runs to the border of a lake. This is the only breeding record for Orange County.

Thousands of acres of the old St. John's marsh, which remained under water practically all the year around, are now partially or completely dry, forming excellent feeding grounds for the Stilts, and it is my prediction that this species will most certainly congregate on this newly formed land, which was caused by the drainage of this locality.

The only place where to my knowledge Stilts are to be found nesting in any numbers is on the south end of Lake Harney. There are about 100 pairs.—DONALD J. NICHOLSON, *Orlando, Fla.*

Additions to the List of Birds of the Douglas Lake Region.—The University of Michigan Biological Station is situated on Douglas Lake in Cheboygan County, about midway between Lake Huron and Lake Michigan and about seventeen miles south of the Straits of Mackinac. Two other extended lists of the birds of this region have been published.[1] Hence, in the present report it is our intention to add only birds recorded since the publication of the list by Messrs. Wood, Smith and Gates. Some of the birds in the present list were seen only at Burt Lake, a much larger body of water due south of Douglas Lake; but since more or less field work is constantly being done on Burt Lake by members of the Biological Station and since the two lakes are so near each other, it seems advisable to add these birds to this list. We have also added certain species observed by Dr. R. M. Strong in 1916 and certain other species observed by Dr. Dayton Stoner in 1919 and 1920, so that the present list, together with the list by Messrs. Wood, Smith and Gates, will give a complete record of the species for the region. Messrs. Wood, Smith and Gates recorded 128 species. To this list we add 18, making a total of 146 for the region.

Horned Grebe (*Colymbus auritus*). One seen on Burt Lake, August 9, 1921.

Black Tern (*Hydrochelidon nigra surinamensis*). One seen on Burt Lake, August 8, 1921.

Golden-eye (*Clangula clangula americana*). One found dead on the beach, August 15, 1919, by Dr. Stoner.

Least Bittern (*Ixobrychus exilis*). Solitary individuals were seen on several occasions on Douglas Lake. One on Burt Lake, August 9, 1921.

Sora (*Porzana carolina*). One seen near the mouth of Maple River, Burt Lake, August 9, 1921. We were able to approach to within about four or five feet with a boat.

Florida Gallinule (*Gallinula galeata galeata*). Apparently common in the marshes at the mouth of Maple River, Burt Lake, August 9, 1921.

Least Sandpiper (*Pisobia minutilla*). One seen with the Semipalmated Plovers on Fairy Island, August 13, 1921.

Semipalmated Sandpiper (*Ereunetes pusillus*). Douglas Lake, August 22, 1921.

Semipalmated Plover (*Aegialitis semipalmata*). Three seen on Fairy Island, August 13, 1921.

Pigeon Hawk (*Falco columbarius columbarius*). One taken Douglas Lake, August 24, 1920, and another August 21, 1921.

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[1]The Birds of the Douglas Lake Region. By J. S. Compton. WILSON BULLETIN, XXVI, pp. 173-180 (1914). The Summer Birds of the Douglas Lake Region, Cheboygan County, Michigan. By Norman A. Wood, Frank Smith, and Frank C. Gates. *Occasional Papers of the Museum of Zoology*, University of Michigan, XXVII, pp. 1-21 (1916).

Yellow-bellied Flycatcher (*Empidonax flaviventris*). One taken at Burt Lake, August 9, 1921. One seen near Biological Station, August 15, 1921.

White-winged Crossbill (*Loxia leucoptera*). An immature female taken at Douglas Lake, July 31, 1916, and two individuals seen in pines near North Fish-tail Bay, August 21, 1916, by Dr. Strong.

Redpoll (*Acanthis linaria linaria*). One seen near camp, August 11, 1919, by Dr. Stoner.

Northern Parula Warbler (*Compsothlypis americana usneae*). One seen at Reese's Bog, July 22, 1919, and one seen August 7, 1920, at Smith's Bog, by Dr. Stoner.

Water-thrush (*Seiurus noveboracensis noveboracensis*). Two in cedar bog of Douglas Lake, August 14, 1920, by Dr. Stoner. One near mouth of Maple River, August 9, 1921.

Connecticut Warbler (*Oporornis agilis*). Two seen near Burt Lake, July 12, in cedar bog.

Short-billed Marsh Wren (*Cistothorus stellaris*). One taken July 14, 1921, at Ingleside.

Long-billed Marsh Wren (*Telmatodytes palustris palustris*). One seen at Lancaster Lake, August 2, 1921. August 9, 1921.—Harry C. Fortner and Z. P. Metcalf, *University Biological Station, Mich.*

A Foot Disease of the Chipping Sparrow in Eastern Ohio.—Through the operation of a drop trap, six by six feet in size, the writer was successful in trapping for banding purposes during the summer of 1928, twenty-two Chipping Sparrows (*Spizella passerina passerina*). It was at once evident that a diseased condition of the feet was prevalent among this species, thirteen individuals of those trapped acting as a host for the malady.

Well advanced cases of the disease, resulting in the ultimate loss of the nails were noted, as, for example, No. B62659, banded September 9, for which the following entry in my records was then made: "Nails gone from middle toe of both feet, hind toe of both feet also infected." It would appear that infection occurred at no great distance from the site of trapping operations. In one case this was certain, No. 697819 being apparently healthy when banded, but when taken twenty-eight days later had contracted the disease, the afflicted parts already being greatly distended. The following notation was then made: "Right foot, middle and hind toes, and tarsus; middle toe left foot, infected."

At the suggestion of Mr. Frederick C. Lincoln, of the Biological Survey, I have concluded that this disease is apparently that known as "bird pox," and is probably identical with that affecting Chipping Sparrows at Thomasville, Georgia, studied in detail in 1923, by Mr. T. E. Musselman (The *Auk*, XLV, pp. 137-147, April, 1928). It is apparent that essentially the same general conditions, in relation to cause and effect, are operative at both widely separated points.

In contrast to conditions at the Thomasville station, it is noted that instead of forty-two per cent of infected birds, as at Thomasville during the year of greatest abundance, there were but fifty-nine per cent found to be suffering apparently from "bird pox," during 1928 at the writer's eastern Ohio trapping station. Preceding the time these birds were taken (August 5 to September 9) the weather was marked by a period of abundant precipitation, which according to Mr. Musselman, serves to "stimulate the activity of the disease."

In the writer's opinion the distribution of "bird pox" is apparently more widespread than is inferred by Mr. Musselman, possibly extending locally throughout the range of the Chipping Sparrow. Its abundance is apparently governed to a large degree by weather conditions during the season when the birds are not taxed with domestic duties and when they are more or less gregarious in their habits. By transmitting the disease from bird to bird, during their migratory movement, it is apparent that new territories will continuously be invaded far removed from the place of original inception.

Although the Chipping Sparrow is the chief subject of attack, the disease is apparently not restricted to this species, but occasionally extends its scope to include other members of the family Fringillidae. To give an idea of the proportion thus afflicted, the total number trapped and banded by the writer, of the species in which the disease was represented, is herewith given, one each of the following having yielded to the attack of this malady. Field Sparrow (13); White-crowned Sparrow (23); Song Sparrow (45); Slate-colored Junco (55).

The writer is aware that the limited number of birds taken by him is inadequate to permit any definite deductions. This note is submitted to point out that insofar as the writer's limited experiences extends, the results of his observations approximately parallel the important findings obtained by Mr. Musselman, and to suggest the probable existence of a more extensive distribution of the disease under consideration.—Paul A. Stewart, *Leetonia, Ohio.*

New Cliff Swallow Colonies in South Dakota.—In the numbers of the Wilson Bulletin for March and September, 1928, Dr. F. L. R. and Mary Roberts, Alfred M. Bailey and T. C. Stephens (in Editor's note), gave some information in regard to the nesting of Cliff Swallows (*Petrochelidon lunifrons lunifrons*) along the "Dells," and about one mile south of Dell Rapids, South Dakota.

Dells Creek leaves the Big Sioux River within the city limits of Dell Rapids and again joins it some three and one-half miles down stream. The colony along the gorge of Dells Creek is an old one, and while no accurate data have been kept, it has seemed to the writer that the colony has been on the decrease during the past few years. The English Sparrows have harrassed this colony for years, and any decrease in numbers can probably be mainly attributed to them.

This summer (1929) it was evident that the colony was much smaller, and on July 13 an attempt was made to count occupied nests. Glasses were used in making observations from the opposite bank and the count showed there were about sixty occupied nests. The English Sparrows were much in evidence and had appropriated nests here and there throughout the colony. The colony had moved a few rods south this year.

Some time previous to making this count I had noted Cliff Swallows gathering mud at three points far removed from the old colony, and this led me to believe that there were other colonies being started in the vicinity. During the period from July 13 to 20 I found three other colonies within one and one-half miles of the old colony, and this probably explains why the original colony was much reduced in numbers this year. One of the new colonies was located along the gorge of the Big Sioux River, near the western city limits, and contained about twenty occupied nests. This is about three-fourths of a mile, in a bee line, from the old colony.

There have been a few scattered nests here in previous years but last year I could find only one nest, so while this probably is not strictly a new colony, there is at least a good increase. The two other colonies, both entirely new, were located under eaves of barns on farms, one containing thirty occupied nests and located one and one-half miles southeast from the old colony, and the other about the same distance northwest having about forty occupied nests. English Sparrows had occupied three or four nests in the new colonies but on the whole the Cliff Swallows seemed to be holding their own fairly well. On July 20 there were still quite a number of nests under construction, and this seems late for nest building.

Some thirty or thirty-five years ago it was a common sight to see rows of Cliff Swallow nests under eaves of farm buildings in this vicinity, but these were entirely given up nesting sites probably some twenty or twenty-five years ago, and I think this was mainly due to increase in English Sparrows at that time. Of late years this pest seems rather on the decrease around here. It is to be hoped that these new Cliff Swallow colonies will be able to maintain themselves and that the birds will also spread to other farms in the neighborhood.—Edwin C. Anderson, *Dell Rapids, S. Dak.*

Occurrence of the Russet-backed Thrush in Iowa.—In the Dwight Collection, at the American Museum of Natural History, there is a specimen of the Russet-backed Thrush (*Hylocichla ustulata ustulata*) from Keokuk, Iowa. It is a male, collected May 20, 1907, formerly in the C. K. Worthen Collection, and now No. 26745 in the Dwight Collection. The bird was identified by the late Dr. Dwight and so noted in his catalog. A comparison of the specimen with a series of *H. u. ustulata* shows it to be typical of that subspecies. The back and rump are olive-brown and the upper breast is faintly spotted with a few triangular marks. The tail is a slight shade grayer. Measurements in millimeters are: Length, 172; wing, 99 and 100; tail, 71; exposed culmen, 13.8; tarsus, 30; middle toe, 17.5, and bill from nostril, 9.2. I know of no other record of this bird from the state of Iowa.—Philip A. Dumont, *American Museum of Natural History, New York City.*

The Raptor's Mistake.—An interesting episode was witnessed on a tract of meadow land, with grass six or eight inches high, near Liberty Creek, in Keokuk County, Iowa. There was a woodland on one side of this meadow and a group of farm buildings on the other.

A large Red-tailed Hawk (*Buteo borealis borealis*) came out of the timber and leisurely flew around over the meadow, hovering over one point a moment for special inspection. Then he flew back to the woods again. A few minutes later he flew out and hovered over the same place, then returned to the woods as before. After having performed this round trip movement several times, the Hawk finally flew to this point and plunged down into the meadow. Instantly there was a mighty commotion. Hissing, flopping, spitting, caterwauling; and one could see feet, claws, wings and tails whirling about just over the grass. The air was full of fur and feathers for a few moments, then the Hawk made his getaway, and with feathers much ruffled flew for the timber as fast as his wings could carry him. And an old gray tom cat went with great bounds in equal haste for the farm buildings! Both Tommy and hawk were licked but still able to go.—E. D. Nauman, *Sigourney, Iowa.*

NECROLOGY

ROBERT RIDGWAY—ORNITHOLOGIST, BOTANIST, GENTLEMAN
1850-1929

Within a few months three of the older group of widely known ornithologists have crossed the bar—Jonathan Dwight, Edward Howe Forbush, and Robert Ridgway. Each of these great scientists filled a special niche in the advancement of ornithology, and their passing entails an irreparable loss which may not easily be repaired. Robert Ridgway, more than anyone else known to the writer, exemplified the ability of the individual to go far into a chosen field of knowledge without the advantages of college preparation. From his earliest childhood he was intensely interested in animal and plant life, and his thirst for knowledge was never quenched.

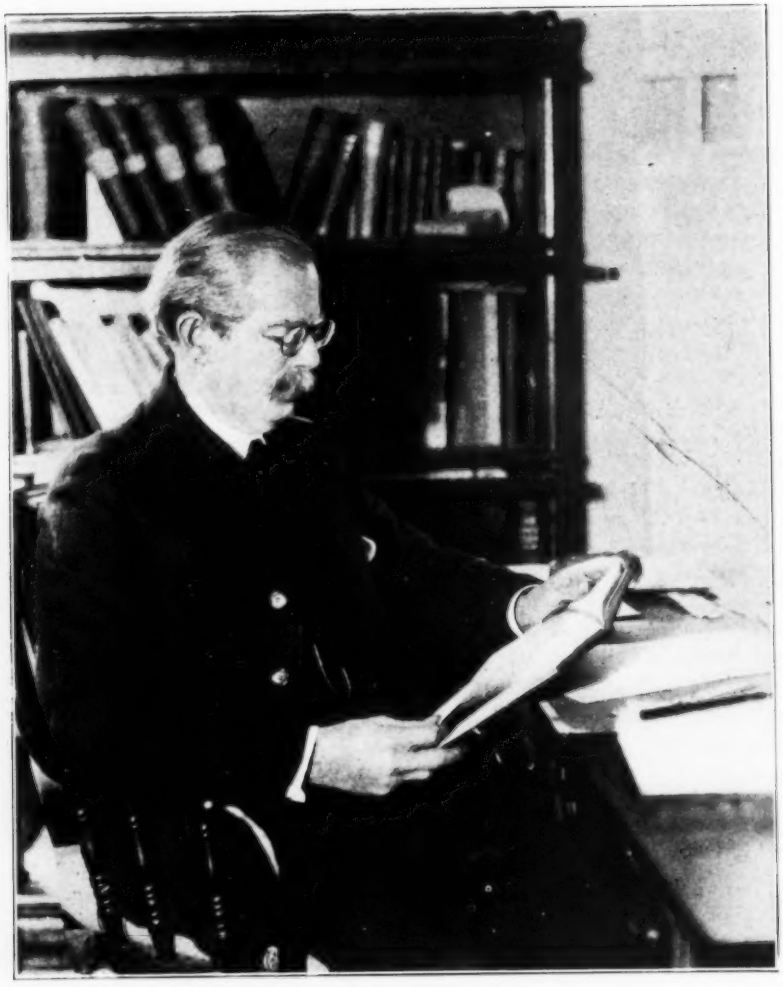
Robert Ridgway was born at Mt. Carmel, Illinois, July 2, 1850. He died at Olney, Illinois, March 25, 1929, in his 79th year. The region in which he grew up was one of the richest fields in the eastern United States for the study of out-of-door life—the meeting place for the northern and southern fauna and flora of Illinois and Indiana.

Possessing a marvelous and orderly memory, having from childhood an almost uncanny sense of proportion and color, Robert Ridgway before he was thirty years of age became a proficient artist and writer. In addition to the voluminous writings of Mr. Ridgway on ornithology he prepared a book of color standards and nomenclature, published in 1912, which proves again the wonderful versatility of this modest, retiring, and altogether lovable man. This color key is now the standard among scientists.

His writings cover a period of over sixty years, and at his death he was actively engaged in the completion of tenth volume of "The Birds of North and Middle America." The ninth volume of this work had been completed by Mr. Ridgway and sent to Washington for publication. It is expected that the tenth volume will be finished by competent hands, thus completing the entire work. Mr. Ridgway's name will be perpetuated, not only in the 540 papers and books which he has written, but also in the names of twenty-three species of birds, and nine subspecies.

His objection to publicity amounted almost to eccentricity, except when his chosen avocations were concerned. He said more than once that the fifty years spent away from his loved southern Illinois were fifty years or homesickness. His devotion to Mrs. Ridgway, during the period before her death in 1927, laid a heavy burden upon him; but there was no shirking or complaining.

While the proverb "A prophet is not without honor save in his own country" does not quite apply to Mr. Ridgway, it is nevertheless true that his fame as an ornithologist and scientist was greater throughout the scientific world than at home. He was an inimitable story teller, with a delightfully keen sense of humor. Anyone who made his acquaintance, if interested in birds or plants, was treated as an equal in scientific knowledge, for Mr. Ridgway never paraded his own knowledge. It was always a source of pleasure to him to find anyone who was interested in the things he was, and no effort was too great when he could pilot his friends through Bird Haven and the Wabash bottoms near



ROBERT RIDGWAY—1850-1929

Mount Carmel. He was ever willing to answer questions, and his letters were models of diction and clarity of expression.

In 1927 he visited Chicago for the first time in twenty-seven years, not traveling by train, however, but in a Ford sedan; for he refused to come if the train was the only way to travel. His delight in the Morton Arboretum in Dupage County, and in Wychwood, the Mrs. Charles Hutchinson Estate at Lake Geneva, of which he was a trustee, gave much pleasure and zest to the friends who had his itinerary in charge. Nothing escaped his keen eyes, and he was greatly interested in the larger number of shocks of grain in northern Illinois and southern Wisconsin as compared with southern Illinois.

At the service marking Mr. Ridgway's passing the Ridgway home was filled with friends and neighbors, and through the open doors could be heard the songs of the Cardinal, the Carolina Wren, and other singing birds—an ideal accompaniment to the service, in which the clergyman said, "While Mr. Ridgway was not known as a religious man, yet never have I known a man more spiritually minded." Mr. Ridgway's resting place is an open knoll in Bird Haven, surrounded by the beautiful trees that he loved so much, and only a few steps from the site of the cottage where he and Mrs. Ridgway lived before they moved to Olney.

To have known Robert Ridgway was an honor, and to have enjoyed his friendship was a rare privilege. A great scientist, a staunch friend, and a worthy descendent of early Quaker pioneers in Pennsylvania, his ornithological work will live long after those who have enjoyed the charm of his personality will have become forgotten memories.—Orpheus Moyer Schantz.

Frank C. Pellett (left) and Robert Ridgway
Photograph made at Olney, February 13, 1929

THOMAS HAYES WHITNEY—1877-1929

THOMAS HAYES WHITNEY
1877-1929

Thomas Hayes Whitney was born in Atlantic, Iowa, on July 9, 1877, and died in Atlantic on September 10, 1929, having lived in the same home throughout the 52 years of his life. He was the son of Franklin H. and Ella Graham Whitney, the former being the founder of the city of Atlantic. The subject of our sketch grew up in his home town as "Tom" Whitney, and was honored and revered by his townspeople. In 1907 he was married to Miss Mabel Taylor who, with a daughter and a son, survives him.

Mr. Whitney, with his brother James G. Whitney, owned and operated the Whitney Loan and Trust Company Bank, Mr. T. H. Whitney being the Vice-President. In one of the obituaries we find this statement: "No finer story was ever written into the annals of any community than the story of how these two brothers discharged all of the obligations of their deceased father and paid every creditor in full. There is not much in life, in the last analysis, but to so live that things are just a little better for one's having been here, but there is much in holding high the torch of honor. And this the Whitney brothers did with fidelity and undying credit to themselves."

The writer first met Mr. Whitney at the meeting of the Nebraska Ornithologists' Union on May 7, 1915, at Omaha, although we had been in correspondence for several years before this. Mr. Whitney became a member of the Wilson Ornithological Club in 1916, and took an active part in the organization of the Iowa Ornithologists' Union in 1923. He served as Vice-President of the W. O. C. from 1925 to 1928. During this time he took the initiative in formulating plans for an endowment fund, and in securing the society's incorporation.

He frequently contributed brief notes to the bird magazines, and his longest paper was a report on his long-continued study of the Purple Martin, which was published in the June number of the WILSON BULLETIN, in 1925.

Mr. Whitney was a dignified and somewhat reserved gentleman, not aloof, but cordial and friendly. His enthusiasms were contagious, and attracted to himself many friends who came to enjoy the same pursuits that he enjoyed. It was probably largely through his leadership that his community maintains a flourishing local bird study club. Among other diversions he was fond of music, and was a leading spirit in his local Congregational Church. Only his friends and acquaintances will fully realize the loss in his premature demise; while his native modesty kept him in the background, his own sterling qualities made friends at every point of contact. With the words of John G. Neihart we close this obituary, as another begins:

> "Let me go quickly, like a candle light
> Snuffed out just at the heyday of its glow.
> Give me high noon—and let it then be night!
> Thus would I go."

—T. C. S.

IN MEMORIAM: WALTHER FREDERICK HENNINGER
1873-1929

Rev. W. F. Henninger, former Treasurer and President of the Wilson Ornithological Club, died after a long illness on February 2, 1929, in Manchester, Michigan. He was an indefatigable, painstaking, and observing ornithologist, as well as mammalogist and entomologist.

Henninger was born on December 2, 1873, at Herman, Missouri. His parents were Rev. Frederick Henninger and his wife, Mary, nee Lenz. The interesting

natural surroundings of his early boyhood home laid the foundation for the intense love of nature that characterized the man throughout his life. When the boy was eleven years old, his mother took him to Europe to have him trained at the schools maintained by the Moravian Brethren at Niesky, Saxony. After seven years of study here, he returned to his native country and finished his theological training in the Seminary of the Evangelical Church at St. Louis, Mo.

In 1894 he was ordained and took his first charge in Ohio, first at Jackson-South Webster. later at Waverly; still later, in 1903, he went to Tiffin. In 1907 he was called to New Bremen, Ohio, where he remained until 1921. In this year his church asked him to go to South America, to assist in the organization of a school in southern Brazil. He accepted this commission, and from 1922 to 1927 threw himself into this new and arduous work with his customary energy. He gave instruction in Latin, Greek, and literature. But in spite of this routine grind, he managed to collect about 800 birds, many large and small mammals, and thousands of insects—all well prepared.

Due either to overwork or to climatic conditions Henninger contracted a disease of the heart and kidneys, which brought him almost to the point of death. But with excellent care and remarkable will-power he recovered sufficiently to make a trip to Europe, to Bad Nauheim in Germany, where the waters have a peculiar regulating effect on the heart. After being pronounced cured he returned to America in 1927. While sojourning with relatives at Tiffin, Ohio, he received a call to the pastorate at Manchester, Michigan, which he accepted. Shortly before his death he contracted influenza, an especially dangerous infection for a person with a weak heart; but when apparently about to recover he suffered two apoplectic strokes, which were fatal.

Henninger was Treasurer of the Wilson Ornithological Club from 1909 to 1914, and President in 1917. We have record of seventy-seven scientific papers published by Henninger, of which forty-four appeared in the WILSON BULLETIN, twelve in the *Auk*, five in the *Osprey*, six in the *Bulletin of the Michigan Ornithological Club*, one in the *Ohio Naturalist*, and nine in foreign journa¹s. Of these forty-eight were brief notes, while the others were longer articles.

In the death of Rev. Henninger American natural history has lost a capable, untiring, and gifted worker; his family, a kind and loving father; his church, a sincere and eloquent servant; his friends, a true and lovable friend, a personality so stimulating and invigorating that there will always be a void in their lives because of his going.—C. W. G. EIFRIG.

PROFESSOR HARRIS MILLER BENEDICT was born at Buda, Illinois, on December 8, 1873, and died at Cincinnati, Ohio, on October 8, 1928, as a result of an automobile accident. He attended Doane College and the University of Nebraska, receiving at the latter institution the degree of B. S. in 1896, and M. S. in 1897. He was given the degree of Ph. D. in 1914 by Cornell University. He was a member of Phi Beta Kappa and of Sigma Xi, of the American Association, the Botanical Society of America, the Ohio Academy of Science, and the Wilson Ornithological Club. He is credited with having originated and developed the Emery Bird Reserve of Cincinnati, the first municipal refuge of the kind. At the time of his death he was professor of Botany in the University of Cincinnati.

ORNITHOLOGICAL LITERATURE

LIFE HISTORIES OF NORTH AMERICAN SHORE BIRDS. ORDER LIMICOLAE (PART 2). By Arthur Cleveland Bent. Bull. 146, U. S. National Museum. Washington, 1929. Pp. i-ix+1-412. Pls. 66. Price, $1.00.

The eighth volume in this series is now before us. The format and plan of treatment under each species follow the last preceding volume. The present volume completes the account of the shore birds, including forty-two forms with two subspecies of the Turnstone.

It seems to be a pity that these volumes are issued in such limited editions. They are bound to be standard for some years to come, and yet the first four or five volumes of the series are even now exhausted—so we are told by persons who have been unsuccessful in securing them. When the Government goes to the expense of publishing a work of this kind the edition ought to be large enough to supply the demand longer than four or five years. The next volume is to be on the Raptores, and will more than likely be in greater demand than any of the preceding ones.—T. C. S.

DEVELOPMENT OF TEMPERATURE CONTROL IN NESTLING HOUSE WRENS. By S. Charles Kendeigh and S. Prentiss Baldwin. Amer. Nat., Vol. LXII, May-June, 1928, pp. 249-278.

In obtaining the temperatures of young birds the authors worked with a specially devised thermocouple, supplemented with an ordinary mercury thermometer. They found that the young wrens at the time of hatching were poikilothermic, i. e., cold-blooded; and that by the time the young birds were ready to leave the nest they had become homiothermic, i. e., warm-blooded. This regulation of body temperature is attributed to four factors, viz., 1) body growth, increase of body mass in higher ratio than external body surface, 2) development of feather covering of body, 3) development of an "internal dissipating surface" through the respiratory system, 4) the metabolic function of the organism. The young bird passes from the cold-blooded to the warm-blooded condition during the nestling period. "That this fact is of significance in the phylogeny of the class is at once evident and suggests that the immediate pre-avian ancestors were cold-blooded."—T. C. S.

CONTRIBUTION TO THE KNOWLEDGE OF THE AVIFAUNA OF NORTH-EASTERN LABRADOR. By Bernhard Hantzsch. Translated by M. B. A. and R. M. Anderson, and published serially in the Canadian Field-Naturalist. 1928-1929.

These contributions by Hantzsch to arctic ornithology appeared originally in 1908 in the *Journal fur Ornithologie*, and have now been translated by Dr. and Mrs. R. M. Anderson, and republished in eleven installments in the *Canadian Field-Naturalist*. The eleven papers have also been combined under one cover without change in pagination. Hantzsch seems to have been one of the rare individuals who are willing to undergo the most extreme hardships for the sake of discovery. His work in north-eastern Labrador was done in 1906, and his report gives notes on ninety-eight species. We notice that the Saxon Ornithological Society recently published a sketch and portrait of Bernard Hantzsch (*Mitt. d. Verein sachsischen Ornithologen*, Sonderheft to Bd. II, April, 1929, pp. 1-28). We thank Dr. and Mrs. Anderson for a copy of the reprint.—T. C. S.

A Study of the Food Habits of the Ring-necked Pheasant in Colorado. By W. L. Burnett.

Feeding Habits and Food of the Ring-necked Pheasant. By Asa C. Maxson. Both papers in Circular 31, Colo. Agric. College, Fort Collins, 1921.

Mr. Burnett examined the stomach contents of 48 pheasants, 31 males, 15 females, and 2 unsexed young. Mr. Maxson examined the stomach contents of 11 adult males. The food items in the crop and gizzard are reported in detail. Both investigations reach the conclusion that the pheasant is chiefly vegetarian, and not a pronounced insect eater. The authors do not draw a conclusion as to the economic value of this bird in a farming community, but leave that for the reader. From the facts presented in these papers we would infer that the Ring-necked Pheasant is of very doubtful economic value.—T. C. S.

Pterylography of Certain North American Woodpeckers. By William Henry Burt. Univ. Calif. Publ. in Zool., Vol. 30, No. 15, pp. 427-442, 7 text figs. Berkeley, 1929.

The author finds a great uniformity in feather distribution on North American Woodpeckers. Excellent diagrams of the pterylography in the Pileated Woodpecker suffice for all twenty-three forms studied. Pterylosis does not seem to be of much value in generic diagnosis, except in the genus *Sphyrapicus*. This phase of ornithology does not seem to have been overworked, and the paper has morphological as well as taxonomic interest.—T. C. S.

The Avifauna of Emeryville Shellmound. By Hildegarde Howard. Univ. Calif. Publ. in Zool., Vol. 32, No. 2, pp. 301-394, pls. 1-4, 55 text figs. Berkeley, 1929.

The Emeryville Shellmound was of Indian origin, and was located on the east coast of San Francisco Bay. When this mound was opened in 1924 bird bones to the number of 6700 were collected in it. At least 46 species of birds were identified from these remains, and all appear to be recent forms. Most of the species were recognized as water birds. The age of the mound is not known, but one authority estimated that its accumulation required possibly 1,000 years. —T. C. S.

A Systematic Study of the Cooper Ornithological Club. By Harry S. Swarth. San Francisco, 1929.

Mr. Swarth has presented in booklet form an excellent sketch of the history of the Cooper Club, from 1893 to 1928, and preceded by a brief account of general ornithological history in that region. The abundance of pictures, groups, and portraits, adds much to the interest and value of the text. We can assure the author that his effort is appreciated widely.—T. C. S.

Bulletin of the Essex County Ornithological Club of Massachusetts. 1928. Pp. 1-64. Apply to Ralph Lawson, Secretary, 88 Washington Square, Salem, Mass. Price, 50 cents.

This publication was first issued in 1919, and has been issued annually since, making ten in all. The 1928 number contains articles by Dr. C. W. Townsend, on a Crow roost; by James L. Peters, on the molts and plumages of the Starling. The remaining pages include five signed articles, six short notes, a

list of the birds seen by the Club during the year, and a list of members. A compact volume of this sort makes a very satisfactory record of the year's activities, and is, no doubt, more permanent than the more frequent mimeographed, or printed, communications issued by other local societies.—T. C. S.

Second Bulletin of the International Committee for Bird Protection. Compiled by T. Gilbert Pearson, Chairman. New York, 1929.

The second bulletin was issued in July of this year, the first one having been issued in 1927. It appears that four meetings of this International Committee have been held, the first three of which are considered informal, viz., London in 1922, Paris in 1923, and Luxembourg in 1925. The first formal meeting was held in Geneva in 1928. This Bulletin includes the proceedings of the Geneva meeting and the papers (in full or abstract) of thirteen of the delegates from various countries. We are interested in the statement by Dr. Hj. Broch, of Norway, that in northern countries, where it takes longer to raise a crop or repair damage, the insect-destroying habit of birds becomes especially important.

The United States personnel of the Committee includes two from Washington, D. C., one from Boston, six from New York City, and one from elsewhere in New York. These members represent two ornithological societies, two sportsman's clubs, and the Audubon Association. The possibilities for bird protection through an international organization are very great, and it would seem that a secure foundation has been laid.—T. C. S.

The Summer Birds of Lake Nipigon. By L. L. Snyder. Trans. Royal Canad. Inst., Vol. XVI, Part 2, pp. 251-277, 1928. Reprinted from the Royal Ontario Museum of Zoology.

The Summer Birds of Lake Abitibi. By L. L. Snyder. Univ. of Toronto Studies, Biol. Series, No. 32, pp. 17-34. 1928. Reprinted for the Royal Ontario Museum of Zoology.

The Nipigon paper is based upon two summers (June and July, 1923, and June, July, and early August, 1924) spent in the region by the author, and some notes from Dr. Walter Koelz, who was in the region in the summer of 1922. This list includes 99 species or subspecies, 92 of which were verified by specimens taken.

The Abitibi paper is based upon field work from June 1 to August 3, 1925 (we infer the year from other papers in the report). This list includes 102 species, of which 85 were collected. At Abitibi the Water-Thrush (*S. n. noveboracensis*) was found, while at Nipigon the only Water-Thrush found was Grinnell's (*S. n. notabilis*). The House Wren (*T. ae. aedon*) was fairly common at Abitibi, but was not found at Nipigon; at the latter place a single pair of Western House Wrens (*T. ae. parkmani*). At Abitibi the Red-winged Blackbird was *A. p. phoeniceus*, while at Nipigon it was identified as *A. p. fortis*. The distance between the two lakes is roughly 400 miles east and west. As might be expected the warblers make a good showing in both of these lists.—T. C. S.

THE EUROPEAN STARLING IN THE UNITED STATES. By E. R. Kalmbach. U. S. Department of Agriculture Farmers' Bulletin No. 1571. Pp. 1-26, Figs. 1-8. Price, 5 cents.

This bulletin deals chiefly with the life history and economic relations of the Starling. The author's conclusion is that the species is distinctly beneficial, but that its habit of congregating in large flocks tends to magnify such bad habits as it may have. Notwithstanding this judicial verdict the report gives evidence of damage done by this bird to several fruits—apples, cherries, grapes, peaches, and pears. No matter what facts in favor of the bird may be hatched up, its presence in this country is probably generally conceded to be a mistake.—T. C. S.

THE SPREAD OF THE EUROPEAN STARLING IN NORTH AMERICA (TO 1928). By May Thacher Cooke. U. S. Department of Agriculture Circular No. 40. Pp. 1-9, 1 map, 1 colored plate. Issued, November, 1928. Price, 5 cents.

This circular treats especially of the extension of range in the United States, with a brief account of Old World distribution, introduction into America, etc. The colored plate, from a painting by E. R. Kalmbach, shows the adult birds in the spring and fall, and the immature bird. The wide distribution of this circular will help materially to secure early reports of the species as it reaches new localities. The bird is spreading with astonishing rapidity, and a new range has been established before a bulletin can be prepared and published.—T. C. S.

GOURDS FOR BIRD HOUSES AND OTHER PURPOSES. By W. L. McAtee and J. H. Beattie. U. S. Dept. of Agric. Leaflet No. 36. Pp. 1-4, Figs. 1-2.

Kinds of gourds, method of cultivation, use as bird houses, are the topics discussed.—T. C. S.

A TRAVELOGUE OF BIRDS. By E. Laurence Palmer. Cornell Rural School Leaflet, XXII, No. 4, March, 1929. Pp. 1-40, Figs. 1-22.

The story of migration is told for the school children. The thirty-two outline drawings of common birds will interest teachers, and a wealth of information is tabulated concerning the same list of birds. This is another educational pamphlet which will have a wide circulation in the state which publishes it.—T. C. S.

SUMMER BIRDS OF AN IOWA FARM. By J. E. Guthrie. Extension Service Bulletin No. 142, Iowa State College, Ames, Iowa. February, 1928.

We missed this pamphlet at the time of its publication. The purpose of the bulletin is to disseminate information about the economic value of birds in an agricultural state. Every effort of this kind must help to awaken a wider interest in bird life. Enough evidence has by this time been gathered to convince nearly everyone that birds, on the whole, are far more useful than harmful. However, there are plenty of people who have not had a chance to examine the evidence. The bulletin contains paragraph descriptions of fifty common birds of the prairie region. Some day Iowa may want to have an unabridged treatise on its birds. —T. C. S.

There comes to our desk regularly a neat little magazine called the *Oologists' Record*, edited by Mr. K. L. Skinner. It deals especially with the nesting of

birds in all parts of the world. The price of the *Record* is $1.25 in U. S. money, but Mr. Skinner states in correspondence that he will be glad to accept one dollar from any W. O. C. member in payment for a year's subscription, and that this may be sent in the form of a "greenback." (Mr. K. L. Skinner, Brooklands Estate Office, Weybridge, England).

The *Florida Naturalist* now continues the "Florida Audubon Bulletin," and we have before us the July, 1929, number edited by R. J. Longstreet. This number contains articles by D. J. Nicholson, Charles J. Pennock, Charles J. Maynard, R. C. Hallman, S. A. Grimes, B. O. Crichlow, and W. M. Buswell. We are sorry not to have seen this magazine sooner. It is well edited, well printed, and contains numerous articles of general interest.

We are glad to examine the first three issues of a new publication called "The Wren-Tit," a four-page Bulletin of the Santa Clara Valley Audubon Society, edited by Dr. Gayle B. Pickwell, of State Teachers College, San Jose, California. In general this leaflet is similar to the *Gull*, and the *Kentucky Warbler*, both of which, we believe, have been temporarily suspended. The subscription price is twenty cents per year.

The *Indiana Audubon Bulletin* for 1928-29 has just been issued, and, like its predecessors, is full of interesting reading. This number contains articles by Dr. Amos W. Butler, S. E. Perkins III, Sidney R. Esten, and several others. The corresponding publications of Indiana, Illinois, Florida, and perhaps a few other states, have adopted a very similar size, which seems to establish a convenient standard.

The *Audubon Annual Bulletin* (of the Illinois Audubon Society) for 1928 was received in April. It contains a variety of prose and poetry. Among the articles we may mention a sketch of Louis Agassiz Fuertes, by Dr. W. H. Osgood; "The Pine Warbler's Song," by Chresswell J. Hunt; and account of the A. O. U. meeting at Charleston, by Ruthven Deane; and a very interesting observation of a pair of House Wrens in the act of destroying an entire brood of nestling Bewick's Wrens. It is planned hereafter to issue this publication as an annual bulletin supplemented by quarterly leaflets.

The Cornell Rural School Leaflet for March, 1929, is devoted to the subject of bird migration. These leaflets are written especially for the use of the schools of New York. A mass of interesting information concerning thirty-two of the commonest species is tabulated at the end of the pamphlet. Dr. E. Laurence Palmer, the Editor, is producing a most useful source book of ornithological and nature facts in this series of leaflets.

INDEX FOR VOLUME XLI, 1929

Compiled by R. D. Hissong

Abbott, Cyril E., Birds in Western Texas, 44-45
Allert, Oscar P., An Unusual Nesting Site of the Dickcissel, 46
Anderson, Edwin C., New Cliff Swallow Colonies in South Dakota, 251
Bailey, Alfred M., Bird Casualties, 106-107
——Bird Photography, 47-50, 108-109, 197-198
——A Hybrid Canada Goose, 107
Bailey, Harold H., Status of Certain East Coast Red-wing Blackbirds, 192-193
Baldwin, S. Prentiss, Communication Concerning Mating of Birds, 62
Ball, William H., Some Notes from South Carolina, 190
Bennett, Walter W., Nesting of the Pine Siskin in Iowa with Remarks on Regurgitative Feeding, 74-77.
Black, J. D., The Bald Eagle in Arkansas, 41
——Nesting of the Purple Finch in Arkansas, 190-191
Blincoe, Ben J., Some Shorebird Records for the Miami Valley, Ohio, 29-31
Bryens, O. M., The Starling Nesting in Luce County, Michigan, 104-105
——Additional Records of the Starling in Michigan, 245
Burns, Frank L., The Mechanical Execution of Wilson's "American Ornithology," 19-23
Cahn, Alvin R., Easter Birds of Little Egypt, 31-38
——European Starling at Urbana, Illinois, 244
Christy, Bayard H., The Hudsonian Chickadee in Michigan, 42
Cottom, Clarence, The Fecundity of the English Sparrow in Utah, 193-194
Dales, Mrs. Marie, The Nesting of the Pine Siskin in Iowa with Remarks on Regurgitative Feeding, 74-77
Danner, May S., The Snowy Egret in Stark County, Ohio, 246
Doolittle, E. A., A Hybrid Field-Vesper Sparrow, 41
——Henslow's Sparrow in a City Yard, 102
——Unusual Nesting of the Barn Swallow, 102
Dumont, Philip A., Holboell's Grebe in Iowa in June, 191
——European Starling at Des Moines, Iowa, 244
——Occurrence of the Russet-backed Thrush in Iowa, 252
Earl, Thomas M., On the Scent of Vultures, 103
Eastwood, Sidney, A Freak Junco, 102
Everett, Edward A., Trapping Juncos and White-throats, 41
Fargo, William G., The Florida Cormorant as Observed in Pinellas County, Florida, 228-235
Ford, Edward R., The Starling in Michigan, 244
Fortner, Harry C., Additions to the List of Birds of the Douglas Lake Region, 249
Foster, W. H., Communication Concerning Heath Hen, 107
Gander, Frank F., Notes on Bird Mimicry with Special Reference to the Mockingbird, 93-95
Ganier, Albert F., Some Unusual Water Bird Visitors to Tennessee, 96-100
Gromme, Owen J., In Search of the Loon with Movie Camera, 203-207
Gross, Alfred O., The Heath Hen Census for 1929, 67-71
Harper, Francis, Spring Bird Notes from Randolph County, Georgia, 235-240
Heath Hen Committee, Communication Concerning the Heath Hen, 63-64
Hicks, Lawrence E., Some Interesting Ohio Records, 43-44
Hoffman, E. C., Communication Concerning European Starling, 62
——Nesting of the Sparrow Hawk, 194-196
Holt, Ernest G., In the Haunts of the Wood Ibis, 3-18
Hyde, A. Sidney, Easter Birds of Little Egypt, 31-38
Koelz, Walter, On a Collection of Gyrfalcons from Greenland, 207-218
Komarek, E. V., Strangulation of Gulls, 41
——Bird Casualties on the Highways, 106
Law, J. Eugene, A Query About a Nest Habit of the Pine Siskin, 192
Lloyd, E. K., Nesting of the European Starling in Butler County, Ohio, 244

Metcalf, Z. P., Additions to the List of Birds of the Douglas Lake Region, 249
Nauman, E. D., The Raptor's Mistake, 252
Necrology, Rev. W. F. Henninger, 64, 258-259
——Robert Ridgway, 253-255
——Thomas Hayes Whitney, 256-257
——Prof. Harris Miller Benedict, 254
Nice, Margaret M., Some Cowbird Experiences in Columbus, Ohio, 42
Nicholson, Donald J., Nesting of the Yellow-throated Warbler in Volusia County, Florida, 45-46
——Peculiar Suspiciousness of Nesting Southern Meadowlarks, 104
——Black Snakes as Bird Killers, 190
——The Breeding Range of the Black-necked Stilt, 248
Ornithological Literature
——Audubon Annual Bulletin, (Illinois), 264
——Bailey, Florence M., Birds of New Mexico, 111
——Bulletin of the Essex County Ornithological Club of Massachusetts, 1928, 261
——Burnett, W. L., A Study of the Food Habits of the Ring-necked Pheasant in Colorado, 261
——Burt, William Henry, Pterylography of Certain North American Woodpeckers, 256
——Cooke, May Thacher, The Spread of the European Starling in North America, 263
——Cornell Rural School Leaflet, 264
——Florida Naturalist, 263
——Guthrie, J. E., Summer Birds of an Iowa Farm, 263
——Hantzsch, Bernard, Contribution to the Knowledge of the Avifauna of Northeastern Labrador, 260
——Howard, Hildegarde, The Avifauna of Emeryville Shellmound, 261
——Indiana Audubon Bulletin for 1928-29, 264
——Kalmbach, E. R., The European Starling in the United States, 262
——Kendeigh and Baldwin, Development of Temperature Control in Nesting House Wrens, 260
——Lincoln, Frederick C., What Constitutes a Record, 113
——McAtee and Beattie, Gourds for Bird Houses and Other Purposes, 263
——Maxson, Asa C., Feeding Habits and Food of the Ring-necked Pheasant, 261
——Oologist's Record, 263
——Palmer, E. Laurence, A Travelogue of Birds, 263
——Pearson, T. Gilbert, Second Bulletin of the International Committee for Bird Protection, 262
——Riley, J. H., A Review of the Birds of the Islands of Siberut and Sipora, Mentawi Group, 114
——Schantz, O. M., Birds of Illinois, 114
——Skinner and Achorn, A Guide to the Winter Birds of the North Carolina Sandhills, 112
——Slevin, Joseph R., A Contribution to Our Knowledge of the Nesting Habits of the Golden Eagle, 115
——Snyder, L. L., The Summer Birds of Lake Nipigon, 262
The Summer birds of Lake Abitibi, 262
——Swarth, Harry S., A New Bird Family from the Galapagos Islands, 115
——A Systematic Study of the Cooper Ornithological Club, 261
——Taverner, P. A., Birds of Western Canada, 113
——Wren-Tit, 264
Perkins, Samuel E., Communication Concerning Mating of Birds, 63
Proceedings of the Joint Meeting of the N. O. U. and I. O. U. at Sioux City, 199-200
Proceedings of the Wilson Ornithological Club, 51-61
Reid, Russel, Nesting of the Pine Siskin in North Dakota, 72-74

Roads, Katie M., The Return of the House Wren, 103
——The Starling at Hillsboro, Ohio, 245
——An Early Nesting of the Killdeer, 246
Roberts, F. L. R. and Mary Price, White Pelican at Spirit Lake, Iowa, 190
Rosen, W. M., Another Snowy Owl Record from Iowa, 102
Spiker, Charles J., The Hungarian Partridge in Northwest Iowa, 24-29
——The Starling at New Hampton, Iowa, 244
Stephens, T. C., Editorial Concerning Wood Ibis Color Plate, 39
——Concerning Bird Protection and South Dakota's Experience with Rodents, 39
——Concerning Private Collections of Mounted Birds, 101
——Concerning Harris's Sparrow Colored Plate, 186
——Concerning Pheasant Planting Fostered by Arms and Ammunition Makers, 187
——Concerning a Crisis in Conservation, 188-189
——Concerning the Ten "Best" Bird Books, 241-242
Stevens, O. A., Harris's Sparrow and the Study of It by Trapping, 129-177
Stewart, Paul A., A Foot Disease of the Chipping Sparrow in Eastern Ohio, 250
Sutton, George Miksch, Tactics of the Domestic Pigeon in Evading the Duck Hawk, 41-42
——Does the Great Horned Owl Have a Poor Memory? 247
Swenk, Myron H., The Pine Siskin in Nebraska in 1928-29, 246-247
——The Pine Siskin in Nebraska: Its Seasonal Abundance and Netsing, 77-92
——Harris's Sparrow and the Study of It by Trapping, 129-177
Taylor, Mrs. H. J., Dr. Elliot Coues—A Sketch, 219-228
Thomas, O. S., The Snowy Owl in Northwestern Iowa, 102
Walkinshaw, Lawrence, The Black Tern Nesting in Calhoun County, Michigan, 102
Wilson, Gordon, Bird Life of a Transient Lake in Kentucky, 177-185
Youngworth, William, A City Robin Roost, 105-106
——The Lazuli Bunting in Iowa, 190
——Ten Minutes with a Kingbird, 196
——The Turkey Vulture in Iowa, 246

Acanthis hornemanni, 217
l. linaria, 249
linaria rostrata, 217
Accipiter cooperi, 36
Actitis macularia, 36, 178, 184
Aegialitis meloda, 31
semipalmata, 184, 249
Agelaius bryanti, 193
floridanus, 193
phoenicius, 185, 193, 262
p. arctolegus, 37
p. fortis, 262
Aix sponsa, 178, 182
Albatross, Black-footed, 106
Ammodramus savannarum, 37
Amphispiza bilineata deserticola, 45
Anas platyrhynchos, 181
rubripes, 181
Anhinga, 234
Anser albifrons gambeli, 36
Anthus rubescens, 185
Antrostomus vociferus, 37
Archilocus colubris, 37
Ardea herodias, 36, 178, 182
Astragalinus psaltria, 45, 192
tristis, 37
Auriparus flaviceps, 45
Baeolophus bicolor, 240
Banding, 53, 54, 166, 51
Bartramia longicauda, 36
Bird Artists, 56-57
Casualties, 106
Photography, 47-50, 52, 107, 197
Protection, 39, 262
Bittern, 113, 182
American, 197
Least, 197, 249
Blackbird, 151
Red-winged, 36, 37, 185, 192, 245, 262
Rusty, 106, 237
Bluebird, 35. 38, 106, 240
Bobolink, 35, 37

Bob-white, 24, 25, 29, 34, 95, 106, 187, 235
Bombycilla cedrorum, 37, 237
Books, Ten Best Bird, 241-2
Botaurus lentiginosus, 182
Branta canadensis, 180, 182
Bubo virginianus, 247
Bunting, Indigo, 36, 37, 42, 190
Lazuli, 190
Butcherbird, 238
Buteo borealis, 36, 252
lineatus, 36
platypterus, 36
Butorides virescens, 36, 178, 183
Buzzard, Turkey, 234
Callipepla squamata, 44
Calyptomena viridis continentis, 114
v. siberu, 114
Canvas-backs, 177, 182
Cardinal, 34, 35, 37, 45, 95, 199, 237, 250
Cardinalis cardinalis, 37, 45, 95, 237
Carpodacus mexicanus, 192
purpureus, 191
Catbird, 34, 38, 62, 106
Cathartes aura septentrionalis, 36, 44, 235, 246
Catopthrophorus semipalmatus, 30
Centurus carolinus, 44, 236
Cerchneis sparveria, 36, 194
Certhia familiaris americana, 38
Ceryle alcyon, 36, 236
Chaemepelia passerina pallescens, 44
Chaetura pelagica, 37
Chat, Yellow-breasted, 34, 38
Chen caerulescens, 97
hyperborea, 97
Chewink, 237
Chickadee, 103
Black-capped, 42, 103
Carolina, 34, 38, 240
Hudsonian, 42
Chlidonias nigra surinamensis, 180
Circus hudsonius, 36, 236
Clangula c. americana, 249
Colaptes auratus, 236
a. luteus, 37
Colinus virginianus, 36, 95, 235
Colymbus auritus, 249
Colymbus holboelli, 191
Compsothlypis americana, 238
a. usneae, 38, 250
Coot, 177, 183, 197
Coragyps urubu, 36, 44, 236
Cormorant, Double-crested, 181
Florida, 6, 8, 228-235
Corvus brachyrhynchos, 37, 236
ossifragus, 233
Coturnicops noveboracensis, 43
Coues, Elliot, A Sketch, 219-228
Cowbird, 34, 37, 42, 76, 82, 106, 110, 112, 192
Creciscus jamaicensis, 43
Creeper, Brown, 34, 38, 52, 53
Crocethia alba, 30
Crow, 34, 37, 53, 151, 236
Fish, 233, 234
Florida, 14
Cyanocitta cristata, 37, 236
Dafila acuta tzitzihoa, 181
Dendroica aestiva, 38
caerulescens, 38
coronata, 38, 238
discolor, 38
dominica, 238
fusca, 38
magnolia, 38
palmarum, 38, 238
vigorsi, 238
virens, 38
Dickcissel, 35, 37, 45
Diomedia nigripes, 106
Dolichonyx oryzivorus, 37
Dove, Mexican Ground, 44
Mourning, 34, 36, 106, 185, 235
White-winged, 44
Dowitcher, 30
Dryobates pubescens medianus, 37
p. pubescens, 236
villosus audubonı, 236
v. villosus, 37
Duck, 179
Black, 177, 181
Ruddy, 182
Scaup, 35, 36
Wood, 178, 182
Golden-eye, 249
Dumetella carolinensis, 38
Eagle, Bald, 41, 190
Golden, 115
Ectopistes migratorius, 178
Egret, 234
American, 16, 45, 98, 231
Snowy, 16, 231, 245
Egretta candidissima, 245
Empidonax flaviventris, 249
Empidonax minimus, 37
Ereunetes pusillus, 184, 249
Erismatura jamaicensis, 182
Falco c. columbarius, 249
Falco candicans, 53
peregrinus anatum, 190
rusticolus, 208, 217
r. alascanus, 208
r. candicans, 208, 217
r. islandus, 208
r. obsoletus, 53, 208, 213
r. uralensis, 208

Finch, Harris's, 130
House, 148, 19 2
Mourning, 130
Purple, 190
Flicker, 36, 42, 53, 104, 195, 236, 244, 245
Northern, 37, 106
Florida caerulea, 182
Flycatcher, Crested, 34, 35, 37
Least, 34, 37
Scissor-tailed, 44
Vermilion, 45
Yellow-bellied, 249
Fringilla comata, 130
harrissii, 130
querula, 130
Fulica americana, 183
Gallinago delicata, 183
Gallinula chloropus cachinnans, 190, 249
Gallinule, Florida, 190, 249
Purple, 43
Gavia immer, 203
Geococcyx californicus, 44
Geothlypis trichas, 38, 42
t. ignota, 238
Gnatcatcher, Blue-gray, 35, 38, 45, 240
Goldfinch, 34, 37
Arkansas, 192
Western, 45
Goose, Blue, 97, 98
Canada, 98. 107, 180, 182
Snow, 97, 98
White-fronted, 35, 36
Goshawk, 42
Grackle, 53
Bronzed, 85, 106, 185
Grebe, Holboell's, 191
Horned, 249
Pied-billed, 35, 36, 178, 180, 197, 198
Grosbeak, Black-headed, 95
Grouse, Ruffed, 20, 28, 53, 115
Guiraca caerulea lazula, 45
Gull, 230
Herring, 96, 180
Laughing, 6
Ring-billed, 41
Gyrfalcons, 53, 207-218
Haliaeetus leucocephalus, 41
Hawk, Broad-winged, 35, 36
Cooper's, 34, 36
Duck, 41, 53, 190
Marsh, 35, 36, 236
Pigeon, 249
Red-shouldered, 35, 36
Red-tailed, 26, 34, 36, 252
Sparrow, 36, 194-196
Hedymeles ludovicianus, 37
Heleodytes brunneicapillus couesi, 45
Helodromas solitarius, 184
Hen, Heath, 63, 67-71, 107
Prairie, 43
Herodias egretta, 98
Heron, 234, 235
Black-crowned Night, 10, 54, 231
Great Blue, 36, 54, 178, 182, 199
Great White, 6, 12
Green, 35, 36, 178, 183
Little Blue, 10, 16, 98, 182, 231
Louisiana, 10, 16, 231
Snowy, 16, 231
Ward's, 6, 12, 16, 231
Himantopus mexicanus, 248
Hirundo erythrogaster, 37, 185
Hummingbird, Ruby-throated, 36, 37
Hydrochelidon nigra surinamensis, 102. 249
Hylocichla guttata pallasi, 38, 240
mustelina, 38
Hylocichla u. ustulata, 252
Hypothymis azurea amelis, 114
a. consobrina, 114
a. isocara, 114
a. ponera, 114
a. leucophila, 114
a. richmondi, 114
Ibis, White, 231
Wood, 3-18, 98
Icteria virens, 38
Icterus galbula, 37
spurius, 37, 236
Ictinia mississippiensis, 36
Ionornis martinicus, 43
Iridoprocne bicolor, 37
Ixobrychus exilis, 249
Jay, Blue, 34, 35, 37, 42, 53, 112, 194, 195
Florida Blue, 190, 236
Junco, 34, 37, 144, 145, 156, 173
Junco hyemalis, 37, 102
Slate-colored, 41, 102, 151
Killdeer, 30, 31, 35, 36, 44, 108, 178, 184, 246
Kingbird, 36, 37, 106, 195, 196, 236
Arkansas, 44
Kingfisher, 36, 236
Kinglet, Golden-crowned, 38, 42
Ruby-crowned, 38, 42, 240
Kite, Mississippi, 36
Lagopus rupestris, 218
Lanius ludovicianus, 237
l. migrans, 37
Lanivireo flavifrons, 37, 238
Lark, Prairie Horned, 35, 37
Larus argentatus, 96, 180
delawarensis, 41
Lobipes lobatus, 29
Loon, 203-207

Lophortyx californicus vallicola, 95
Loriculus galgulus lamprochlorus, 115
Loxia leucoptera, 249
Macrorhamphus lymnodromus griseus, 30
Mallard, 177, 181
Marila affinis, 36
valisineria, 182
Martin, Purple, 36, 37, 104, 237, 257
Mating, 62-63
Meadowlark, 35, 37, 42, 106
Southern, 104, 236
Melanerpes erythrocephalus, 37, 94, 236
Melopelia asiatica, 44
Meleagris gallopavo silvestris, 178
Melospiza georgiana, 37
melodia cooperi, 95
m. melodia, 37
Membership Roll, 116-128
Merganser, 181, 230
Red-breasted, 192, 230
Mergus americanus, 181
Micropalama himantopus, 30, 43
Migration, 52, 54, 149
Mimus polyglottos leucopterus, 45
p. polyglottos, 38, 93, 238
Mniotilta varia, 38, 238
Mocker, French, 238
Mockingbird, 36, 38, 53, 93-95, 112, 238
Western, 45
Molothrus ater, 37, 42, 110
bonariensis, 110
rufo-axillaris, 110
Motacilla, 238
Muscivora forficata, 44
Mycteria americana, 10, 98
Myiarchus crinitus, 37
Myiochanes virens, 37, 236
Nettion carolinense, 181
Nuthatch, Brown-headed, 239
Florida White-breasted, 239
White-breasted, 34, 38
Nyctea nyctea, 102
Oidemia deglandi, 98
Olor columbianus, 97
Oporornis agilis, 250
Oporornis formosus, 38
Oriole, Baltimore, 36, 37
Orchard, 35, 37, 236
Osprey, 184
Otocoris alpestris praticola, 37
Otus asio asio, 36
Ouzel, Water, 52
Owl, Barred, 34, 36
Florida Barred, 236
Great Horned, 247
Screech, 34, 36, 53, 106, 195
Snowy, 102
Oxychus vociferus, 36, 44, 178, 184, 246
Pandion haliaetus carolinensis, 184
Partridge, Hungarian, 24-29, 187
Parus bicolor, 38
Passer domesticus, 193, 237
Passerculus sandwichensis savanna, 185
Passerherbulus henslowi, 185
Passerina amoena, 190
cyanea, 37, 190
Pelecanus erythrorhynchos, 96, 190
Pelican, 6, 234, 235
Brown, 10, 230, 231
White, 96, 190, 235
Pelidna alpina sakhalina, 30
Penthestes atricapillus, 42
carolinensis, 38, 240
hudsonicus, 42
Perdix perdix, 24
Petrochelidon l. lunifrons, 251
Peucaea aestivalis, 37
a. bachmani, 237
Pewee, Wood, 34, 37, 236
Phalacrocorax auritus, 181
a. floridanus, 228
Phalarope, Northern, 29
Pheasant, Ring-necked, 24, 25, 28, 106, 115, 187, 261
Philohela minor, 106
Phloeotomus pileatus abieticola, 37
Phoebe, 36, 37, 102
Pigeon, Domestic, 41
Passenger, 178
Pintail, 177, 181
Pipilo erythropthalmus, 37, 237
Pipit, 178, 185
Sprague's, 113
Piranga erythromelas, 37
rubra, 37, 237
Pisobia maculata, 183
minutilla, 183, 249
Planesticus migratorius, 38, 105
Plover, Golden, 31, 43
Piping, 31
Semipalmated, 31, 184, 249
Upland, 36
Pluvialis dominica, 31
Podilymbus podiceps, 36, 178, 180
Polioptila caerulea, 38, 240
Pooecetes gramineus, 37, 237
Porzana carolina, 36, 183, 249
Prairie chicken, 28
Proceedings of the Wilson Ornithological Club, 51-61
Progne subis, 37, 237
Protonotaria citrea, 38
Ptarmigan, 218
Pyrocephalus rubineus mexicanus, 45

Quail, 36
Scaled, 44
Valley, 95
Querquedula discors, 181
Quiscalus quiscula aeneus, 185
Rail, Black, 43
King, 177, 183, 197
Virginia, 35, 36, 197
Yellow, 43
Rallus elegans, 183
virginianus, 36
Redpoll, 217, 249
Redstart, 38
Regulus satrapa, 38, 42
calendula, 38, 42, 240
Rhynchodon peregrinus anatum, 41
Riparia riparia, 37
Road-runner, 44
Robin, 35, 38, 42, 105, 195
Rynchops nigra, 100
Sanderling, 30
Sandpiper, Least, 178, 183, 184, 249
Pectoral, 30, 183, 184
Red-backed, 30
Semipalmated, 30, 184, 249
Solitary, 35, 36, 177, 184
Spotted, 31, 35, 36, 178, 184
Stilt, 30, 43
Sapsucker, Yellow-bellied, 37, 236
Sayornis phoebe, 37
Scoter, White-winged, 98
Seiurus motacilla, 185, 238
noveboracensis, 38, 250, 262
n. notabilis, 262
Setophaga, ruticilla, 38
Shrike, Loggerhead, 237
Migrant, 36, 37
Sialia sialis, 38, 240
Siskin, Pine, 72-92, 191, 192, 246-247
Sitta carolinensis atkinsi, 239
c. carolinensis, 38
pusilla, 239
Skimmer, Black, 100
Snakes, 190
Snipe, Wilson's, 183
Sora, 35, 36, 53, 113, 183, 197, 249
Sparrows, Bachman's, 37, 237
Chipping, 35, 37, 191, 237, 250
Desert, 45
English, 24, 106, 112, 193, 195, 236
Field, 35, 37, 41, 42, 237
Fox, 157
Gambel's, 146, 148, 156, 161
Golden-crowned, 148, 156
Grasshopper, 35, 37
Harris's, 52, 53, 129-177, 186
Henslow's, 102, 185
House, 237
Nuttall's, 148
San Diego, 95
Savannah, 185
Song, 34, 37, 42, 95, 144, 148, 151, 157, 162
Swamp, 37
Tree, 145, 156, 157, 159, 173
Vesper, 35, 37, 41, 237
White-crowned, 34, 37, 143, 144, 145, 156, 161
White-throated, 34, 37, 41, 112, 132, 143, 144, 156, 159, 161, 237
Sphyrapicus varius, 37, 236
Spinus pinus, 72, 74, 191
Spiza americana, 37, 45
Spizella passerina, 37, 191, 237, 250
pusilla, 37, 237
Spoonbill, Roseate, 14, 18
Starling, European, 24, 62, 104, 244, 245, 261, 262, 263
Stelgidopteryx serripennis, 37
Sterna caspia, 99, 180
fuscata, 99
hirundo, 181
Stilt, Black-necked, 247
Stork, 14
Strix varia varia, 36
v. alleni, 236
Sturnella magna, 37
m. argutula, 104, 236
Sturnus vulgaris, 104, 243, 244
Swallow, Bank, 36, 37
Barn, 36, 37, 52, 102, 185
Cliff, 251
Rough-winged, 36, 37
Tree, 37, 105
Swan, Whistling, 97
Swift, Chimney, 36, 37
Tanager, Scarlet, 34, 37
Summer, 34, 37, 237
Teal, Green-winged, 177, 181
Blue-winged, 177, 181
Telmatodytes p. palustris, 250
Tern, 230
Black, 54, 102, 177, 180, 249
Caspian, 99, 177, 180
Common, 51, 181
Royal, 6
Sooty, 99
Thrasher, Brown, 34, 38, 239
California, 95
Thrush, Hermit, 34, 38, 240
Russet-backed, 252
Wood, 34, 35, 38
Thryomanes bewicki, 38, 103
b. cryptus, 45
Thryothorus ludovicianus, 38, 239
Titmouse, Tufted, 34, 35, 38, 240
Totanus flavipes, 184
melanoleucus, 184
Towhee, 34, 37, 62, 237
White-eyed, 190

Toxostoma rediviyum, 95
rufum, 38, 239
Tringa solitaria, 36
Troglodytes aedon, 38, 103, 262
ae. parkmani, 262
Turkey, Wild, 112, 178
Tympanuchus americanus, 43
Tyrannus tyrannus, 37, 196, 236
Verdin, 45
Vermivora celata, 190
pinus, 38
Vireo, Bell's, 54
griseus, 38, 238
Red-eyed, 34, 35, 37
Warbling, 37
White-eyed, 34, 38, 238
Yellow-throated, 34, 35, 37, 238
Vireosylva gilva, 37
olivacea, 37
Vulture, Black, 36, 44, 112, 234, 326
Turkey, 14, 34, 36, 44, 103, 112, 235, 246
Wagtail, European, 238
Water-thrush, 38, 52, 250
Northern, 52
Louisiana, 52, 185, 238, 262
Water-turkey, 10
Waxwing, Cedar, 34, 36, 37, 237
Whip-poor-will, 34, 37
White-winged Crossbill, 249
Willet, 30
Wilsonia citrina, 238
Woodcock, 106
Woodpecker, Downy, 34, 37, 103, 244
Hairy, 34, 37
Pileated, 34, 37, 261
Red-bellied, 34, 44, 236
Red-headed, 34, 35, 37, 94, 106, 236, 244
Southern Downy, 236
Southern Hairy, 236
Wren, Bewick's, 36, 38, 103, 264
Cactus, 45
Carolina, 33, 34, 35, 38, 239, 255
Eastern House, 103
House, 36, 38, 51, 62, 196, 260, 262
Long-billed Marsh, 250
Short-billed Marsh, 250
Texas Bewick's, 45
Western House, 262
Warblers, Black and White, 34, 38, 238
Blackburnian, 34, 38
Black-throated Blue, 34
Black-throated Green, 34, 38
Blue-winged, 34, 38, 44
Brewster's, 44
Cairn's, 52
Connecticut, 250
Golden-winged, 44
Hooded, 238
Kentucky, 38
Lawrence's, 43
Magnolia, 34, 35, 38
Myrtle, 34, 38, 238
Northern Parula, 38, 250
Orange-crowned, 190
Palm, 18, 34, 38, 238
Parula, 34, 35, 45, 238
Pine, 264
Prairie, 34, 38
Prothonotary, 35, 38, 45
Yellow, 38
Yellow-throated, 45, 238
Yellow-legs, 30
Greater, 184
Lesser, 177, 178, 184
Yellow-throat, Florida, 238
Maryland, 36, 38, 42
Zamelodia melanocephala, 95
Zenaidura macroura carolinensis, 36, 185, 235
Zonotrichia albicollis, 37, 237
leucophrys, 37
querula, 129-177

At this time the program of the Des Moines meeting is not complete, but we are assured of one of the best in our history. We can only mention a few of the pictorial features already promised. Mr. Stoddard's wonderful movie reels of Florida birds are on the list. These were shown two years ago at the Nashville meeting, and nothing better exists. The exciting movie pictures of the Loon in its wild habitat, as described by Mr. Gromme in this issue, will also be shown. Mr. W. F. Kubichek will show some new slides and movies of water birds. Mr. W. W. Bennett will show colored slides and some new movies, the latter including the Ruby-throated Hummingbird and the Pine Siskin. Dr. Jones and Mr. Ganier also have illustrated papers. We are also sure of other movies and lantern slide papers from authors who have not yet given us the final word. There will be numerous other papers, whether illustrated or not, to fill two days and evenings. You are invited to attend.

Mr. George Miksch Sutton is now on Southampton Island, Canada. The Broadcasting Station KDKA broadcasts to the far north twice a month. Messages for Mr. Sutton may be sent through this Station, and should be sent to KDKA, Pittsburgh, Pa., addressed to Mr. Sutton. His friends are invited to send some word to him through the long winter.

The Editor wishes a Merry Christmas and a Happy New Year to all readers of the WILSON BULLETIN. The past year has been a happy and fairly prosperous one for the BULLETIN. We are all much indebted to our Treasurer for his splendid work in keeping our funds in excellent condition, and our debts paid up. The Editor is appointed each year by the officers. He should not be appointed for a longer term, lest he cease to reflect the will of his organization. This year closes the fifth for the present Editor. Careful attention should be given this year in the selection of the Editor. The present Editor can not very much change his methods, but he can, and gladly will, give way.

Our members and readers are requested to notify us of any advance of the Starling into new territory. Mr. E. C. Hoffman is preparing a map which will be published in the March issue. You may send reports either to the Editor or to Mr. E. C. Hoffman, 740 West Superior Ave., Cleveland, Ohio.

Lest We Forget

"Nevertheless he must here record an earnest protest, futile though it may be, against the fatal facility with which the system of trinomials lends itself to sad consequences in the hands of immature and inexperienced specialists. No allusion is here intended to anything that has been done, but he must reiterate what was said before (Key, p. xxvii) respecting what may be done hereafter if more judicious conservatism than we have enjoyed of late be not brought to bear down hard upon trifling incompetents. The 'trinomial tool' is too sharp to be made a toy; and even if we do not cut own own fingers with it, we are likely to cut the throat of the whole system of naming we have reared with such care. Better throw the instrument away than use it to slice species so thin that it takes a microscope to perceive them. It may be assumed, as a safe rule of procedure, that it is useless to divide and subdivide beyond the fair average ability of ornithologists to recognize and verify the result. Named varieties of birds that require to be 'compared with the types' by holding them up slantwise in a good strong light—just as the ladies match crewels in the milliner's shop—such often exist in the cabinets or in the books of their describers, but seldom in the fields." Pages ix-x.

"The pliability and elasticity of our trinomial system of nomenclature is very great. . . . We seem to be in danger of going too far, if not too fast, in this direction. It is not to cry 'halt!'—for any advance is better than a standstill; but it is to urge prudence, caution, and circumspection, lest we be forced to recede ingloriously from an untenable position—that these words are penned, with a serious sense of their necessity."—ELLIOTT COUES, Key to North American Birds, 5th edition, page xxvii.